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411

-001 thru -008

Power Examination Table

MIDMARK®

Service and Parts Manual

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411 -001 thru -008

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SF-1492

Part No. 004-0004-00 Rev. Q (2/13/12)

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IMPORTANT INSTRUCTIONS

General Safety Instructions

Safety First: The primary concern of Midmark Corporation is that this table is maintained with the safety of the patient and staff in mind. To assure that services and repairs are completed safely and correctly, proceed as follows:

(1) Read this entire manual before performing any services or repairs on this table.

(2) Be sure you understand the instructions contained in this manual before attempting to service or repair this table.

Safety Alert Symbols

Throughout this manual are safety alert symbols that call attention to particular procedures. These items are used as follows:

DANGER

A DANGER is used for an imminently hazardous operating procedure, practice, or condition which, if not correctly followed, will result in loss of life or serious personal injury.

WARNING

A WARNING is used for a potentially hazardous operating procedure, practice, or condition which, if not correctly followed, could result in loss of life or serious personal injury.

CAUTION

A CAUTION is used for a potentially hazardous operating procedure, practice, or condition which, if not correctly followed, could result in minor or moderate injury. It may also be used to alert against unsafe practices.

EQUIPMENT ALERT

An EQUIPMENT ALERT is used for an imminently or potentially hazardous operating procedure, practice, or condition which, if not correctly followed, will or could result in serious, moderate, or minor damage to unit.

NOTE

A NOTE is used to amplify an operating procedure, practice or condition.

Warranty Instructions

Refer to the Midmark "Limited Warranty" printed in the Installation and Operation Manual for warranty information. Failure to follow the guidelines listed below will void the warranty and/or render the 411 Power Examination Table unsafe for operation.

- In the event of a malfunction, do not attempt to operate the table until necessary repairs have been made.
- Do not attempt to disassemble table, replace malfunctioning or damaged components, or perform adjustments unless you are one of Midmark's authorized service technicians.
- Do not substitute parts of another manufacturer when replacing inoperative or damaged components. Use only Midmark replacement parts.

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SECTION I
GENERAL INFORMATION

1.1 Scope of Manual

This manual contains detailed troubleshooting, scheduled maintenance, maintenance, and service instructions for 411 Power Examination Table. This manual is intended to be used by Midmark's authorized service technicians.

1.2 How to Use Manual

A. Manual Use When Performing Scheduled Maintenance.

(1) Perform inspections and services listed in Scheduled Maintenance Chart (Refer to para 3.1).

(2) If a component is discovered to be faulty or out of adjustment, replace or adjust component in accordance with maintenance/service instructions (Refer to para 4.1).

B. Manual Use When Table Is Malfunctioning And Cause Is Unknown.

(1) Perform an operational test on table (Refer to para 2.1).

(2) Perform troubleshooting procedures listed in Troubleshooting Guide (Refer to para 2.2).

(3) If a component is discovered to be faulty or out of adjustment, replace or adjust component in accordance with maintenance/service instructions (Refer to para 4.1).

C. Manual Use When Damaged Component Is Known.

(1) Replace or adjust component in accordance with maintenance/service instructions (Refer to para 4.1).

1.3 Description Of 411 Power Examination Table

A. General Description (See Figure 1-1).

The 411 Power Examination Table is an examination table designed specifically for performing general medical examinations and procedures.

The major serviceable components of the table are the headlock, back actuator, back transmitter, back receiver, back capacitor, foot actuator, foot transmitter, foot receiver, foot capacitor, tilt actuator, tilt transmitter, tilt receiver, tilt capacitor, base actuator, base transmitter, base receiver, base capacitor, base down limit switch, chain assembly, base slide assembly, gas spring(s), program panel, program panel interface board, PC logic board, interface board, hand control panel, hand control PC board, foot control foot switches, and pan safety limit switch.

B. Theory of Operation (See Figures 5-1 and 5-2 for wiring diagrams / electrical schematics)

Electrical Power:

Line voltage (115 VAC for domestic units and 230 VAC for export units) is supplied directly to the table's interface board. There is a transformer and associated follow-on circuitry on the interface board which reduces the line voltage to 12 - 14 VDC. The 12-14 VDC provides power to operate the circuitry of the PC logic board, hand control, and foot control.

On domestic units, 115 VAC is continuously supplied to the electrical receptacle. Export units do not have an electrical receptacle.

Manual Operation of Base, Tilt, Back, and Foot Actuator Assemblies:

When a manual function is selected using the manual positioning buttons on the hand control or program panel, a signal is sent thru the PC logic board to the interface board. The signal causes the appropriate relay on the interface board to energize (i.e., if the TILT UP button is depressed on hand control, the Tilt UP relay on interface board is energized). Line voltage is continuously supplied to all relays on interface board. So, when a relay is energized, the line voltage flows thru the relay and is applied across the windings of the actuator motor, causing it to run. When the hand control button is released, the relay de-energizes, removing the line voltage from the windings of the actuator motor and causing it to stop running.

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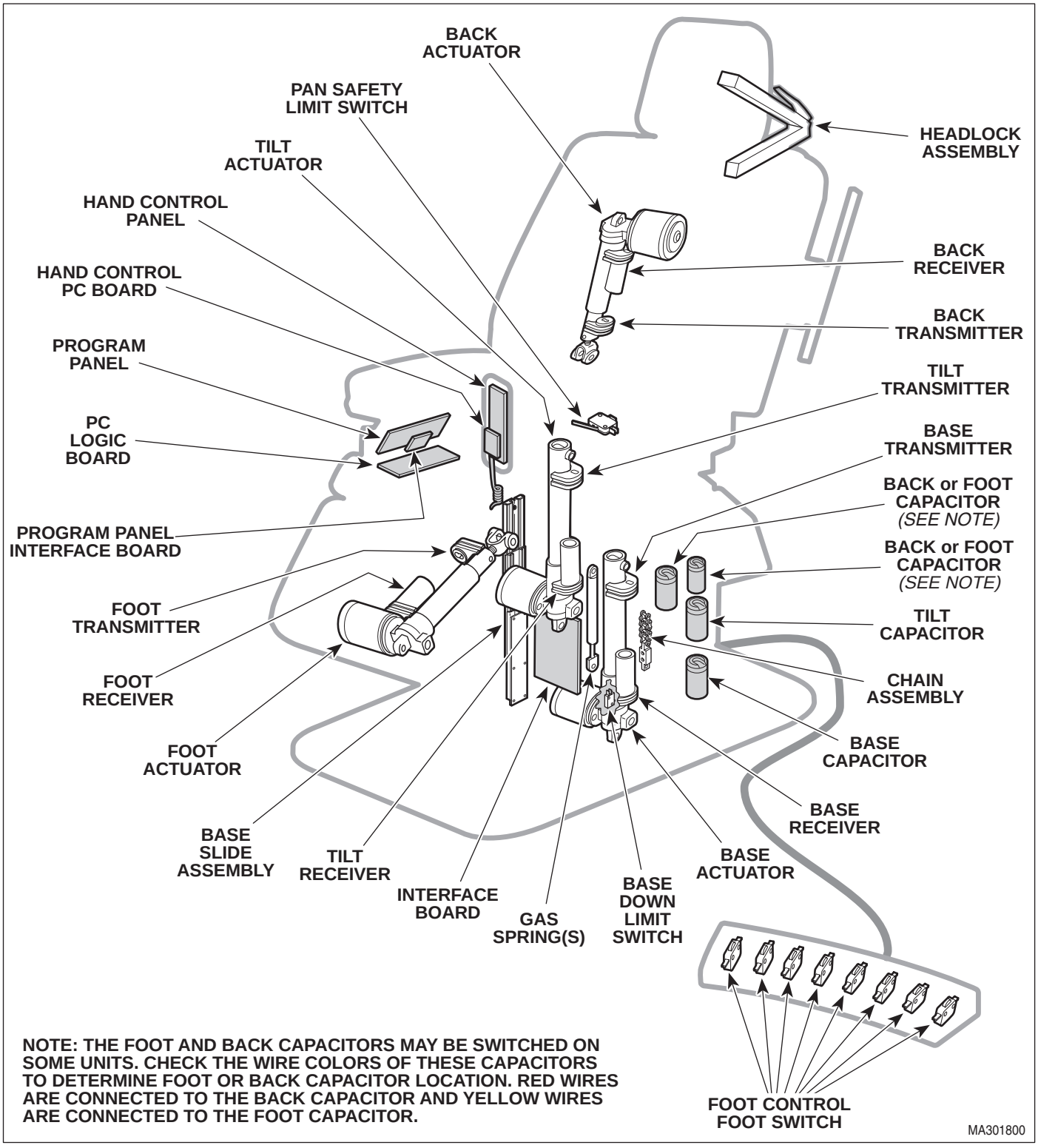
BACK ACTUATOR
PAN SAFETY LIMIT SWITCH
TILT ACTUATOR
HAND CONTROL PANEL
HAND CONTROL PC BOARD
PROGRAM PANEL
PC LOGIC BOARD
PROGRAM PANEL INTERFACE BOARD
FOOT TRANSMITTER
FOOT RECEIVER
FOOT ACTUATOR
BASE SLIDE ASSEMBLY
TILT RECEIVER
INTERFACE BOARD
GAS SPRING(S)
BASE DOWN LIMIT SWITCH
BASE ACTUATOR
BASE RECEIVER
BASE CAPACITOR
CHAIN ASSEMBLY
TILT CAPACITOR
BACK or FOOT CAPACITOR (SEE NOTE)
BACK or FOOT CAPACITOR (SEE NOTE)
BASE TRANSMITTER
TILT TRANSMITTER
BACK TRANSMITTER
BACK RECEIVER
HEADLOCK ASSEMBLY
FOOT CONTROL FOOT SWITCH
NOTE: THE FOOT AND BACK CAPACITORS MAY BE SWITCHED ON SOME UNITS. CHECK THE WIRE COLORS OF THESE CAPACITORS TO DETERMINE FOOT OR BACK CAPACITOR LOCATION. RED WIRES ARE CONNECTED TO THE BACK CAPACITOR AND YELLOW WIRES ARE CONNECTED TO THE FOOT CAPACITOR.
MA301800

Figure 1-1. Major Components

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Actuator Operation:

The Base, Tilt, Back, and Foot actuators are ball screw driven. The actuator assemblies contain a pivot point on the end of the ball screw. If an actuator assembly is run to the end of its stroke, the ball screw shaft spins inside the nut, which allows the actuator assembly to run without damaging or advancing the nut.

The Base, Tilt, Back, and Foot actuators have internal braking mechanisms which use a friction device to keep actuator stationary when the actuator is not being run.

Programming Operation:

The model 411 can be programmed for up to eight operator specified positions. To program a position into memory, the operator uses the manual positioning buttons on the hand control or program panel to position the table top in the desired position. Now, the PC logic board determines the position of each function as follows: each actuator has a transmitter and a receiver attached to it; the receiver is mounted to the motor end of the actuator and is stationary while the transmitter is mounted to the moving actuator shaft of the actuator. The PC logic board has the transmitter on each actuator shaft continuously transmit a high frequency sound wave which is received by its receiver. The PC logic board compares the transmit point on the wave form against the receive point on the wave form and uses this data to determine the distance between the transmitter and receiver for each actuator. The PC logic board uses this frequency measuring technique to determine the position of the actuators at all times. The operator now presses the PROGRAM button followed by one of the eight PROGRAMMED POSITION buttons. The red L.E.D. under the PROGRAM button will illuminate when the PROGRAM button is pressed and will remain illuminated for four seconds to inform the operator that he / she may now select a PROGRAMMED POSITION button (1 thru 8). After four seconds, the PROGRAM function will automatically disable itself if a PROGRAMMED POSITION button has not been selected. When a PROGRAMMED POSITION button is pressed, the receive point on the wave form for each actuator is stored into memory.

Now the operator can easily return to the position stored in memory. To do so, the operator presses and holds the PROGRAMMED POSITION button (1 thru 8) which has the desired position stored in memory. The PC logic board compares the receive point on the wave form that is actually being measured by each actuator's transmitter / receiver set, against the value stored in the PC logic board's memory. The PC logic board then energizes the appropriate relays and allows each actuator to run until the receive point on the wave form being measured by each actuator's transmitter / receiver set is equal to the value stored in the PC logic board's memory. When the values are equal, the relays are de-energized, stopping the actuators.

Auto Return Operation:

When the operator presses the AUTO RETURN button, the PC logic board energizes the base actuator's down relay, causing the base actuator to run. The base actuator lowers until the base down limit switch is tripped. The PC logic board also senses that the base down limit switch is tripped and de-energizes the base actuator relays.

If the operator, at any time, wishes to stop the auto return function, he / she can press the STOP button. The PC logic board senses that the STOP button has been pressed and de-energizes the base actuator relays, causing the base actuator to stop.

Pan Safety Limit Switch:

The table has a N.O. pan safety limit switch. If the pan assembly is not pushed into its fully stowed position, the pan safety limit switch will not be tripped and there will be an open circuit. If the pan safety limit switch circuit is open, no power can reach the foot actuator windings, preventing movement of the FOOT UP and FOOT DOWN function. This safety feature prevents the operator from accidentally colliding the foot section into the treatment pan assembly.

General Information:

All actuator motors have a thermal overload switch which will activate if the actuator assembly is run continuously. The actuator motor was not designed for continuous operation. The normal cool off period for the thermal overload switches is 10 - 20 minutes.

Each actuator motor has a capacitor which provides start up power and motor run power.

There is a 0.15 amp fuse, located on the interface board, which provides over-current protection for the transformer.

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SECTION I
GENERAL INFORMATION

There are four 5 amp slow blow fuses, located on the interface board, which provide over-current protection for each function's motors (i.e, Tilt fuse protects tilt actuator motor).

Under the control console, there is an ON / OFF switch. Turning the switch to OFF disables movement of the table, preventing accidental table movement or patients from operating table. A red CONTROL PANEL POWER L.E.D. illuminates when the ON / OFF switch is in the ON position.

1.4 Specifications

Factual data for the 411 Power Examination Table is provided in Table 1-1. Also, see Figure 1-2.

Table 1-1. Specifications

Description	Data
Weight:	
Without Shipping Carton	550 lb (249.5 kg)
With Shipping Carton	625 lb (283.5 kg)
Shipping Carton	58 in. "L" x 42 in. "W" x 31 in. "H" (147.3 cm x 106.7 cm x 78.7 cm)
Dimensions (See Figure 1-2):	
Table Top Length	70.5 in. (179.0 cm)
Table Top Length (headrest extended)	81 in. (205.7 cm)
Table Top Width	27 in. (68.6 cm)
Overall Width	27 in. (68.6 cm)
Table Adjustment:	
Back Section	0 to 85°
Foot Section	0 to -87°
Tilt Function	0 to 42°
Table Top Height (Adjustable):	25.75 in. to 41.625 in. (65.4 cm to 105.7 cm)
Table Speeds:	
TABLE UP	12 +/- 1 seconds
BACK UP	10 +/- 1 seconds
TILT UP	11 +/- 1 seconds
FOOT UP	10 +/- 1 seconds
Weight Capacity (Maximum)	300 lb. (136.0 kg)
Electrical Requirements:	
115 VAC Unit	110 - 120 VAC, 60 HZ, 12 amp, single phase
230 VAC Unit	220 - 240 VAC, 50/60 HZ, 10 amp, single phase
Power Consumption:	
115 VAC Unit	1440 WATTS, 12 amps @ 120 VAC
230 VAC Unit	2400 WATTS, 10 amps @ 240 VAC
Recommended Circuit: A separate (dedicated) circuit is recommended for this table. The table *should not* be connected to an electrical circuit with other appliances or equipment unless the circuit is rated for the additional load.	

1.5 Parts Replacement Ordering

If a part replacement is required, order the part directly from the factory as follows:

(1) Refer to Figure 1-3 to determine the location of the model number and serial number of the table and record this data.

(2) Refer to the Parts List to determine the item numbers of the parts, part numbers of the parts, descriptions of the parts, and quantities of parts needed and record this data (Refer to para 6.1).

NOTE
Ask the Purchasing Department of the company that owns the table for this information. Otherwise, this information may be obtained from the dealer that sold the table.

(3) Determine the installation date of the table and record this data.

(4) Call Midmark with the recorded information and ask for the Medical Products Technical Services Department. See back cover of this manual for the phone number or use the Fax Order Form (See page 7-2 for Fax Order Form).

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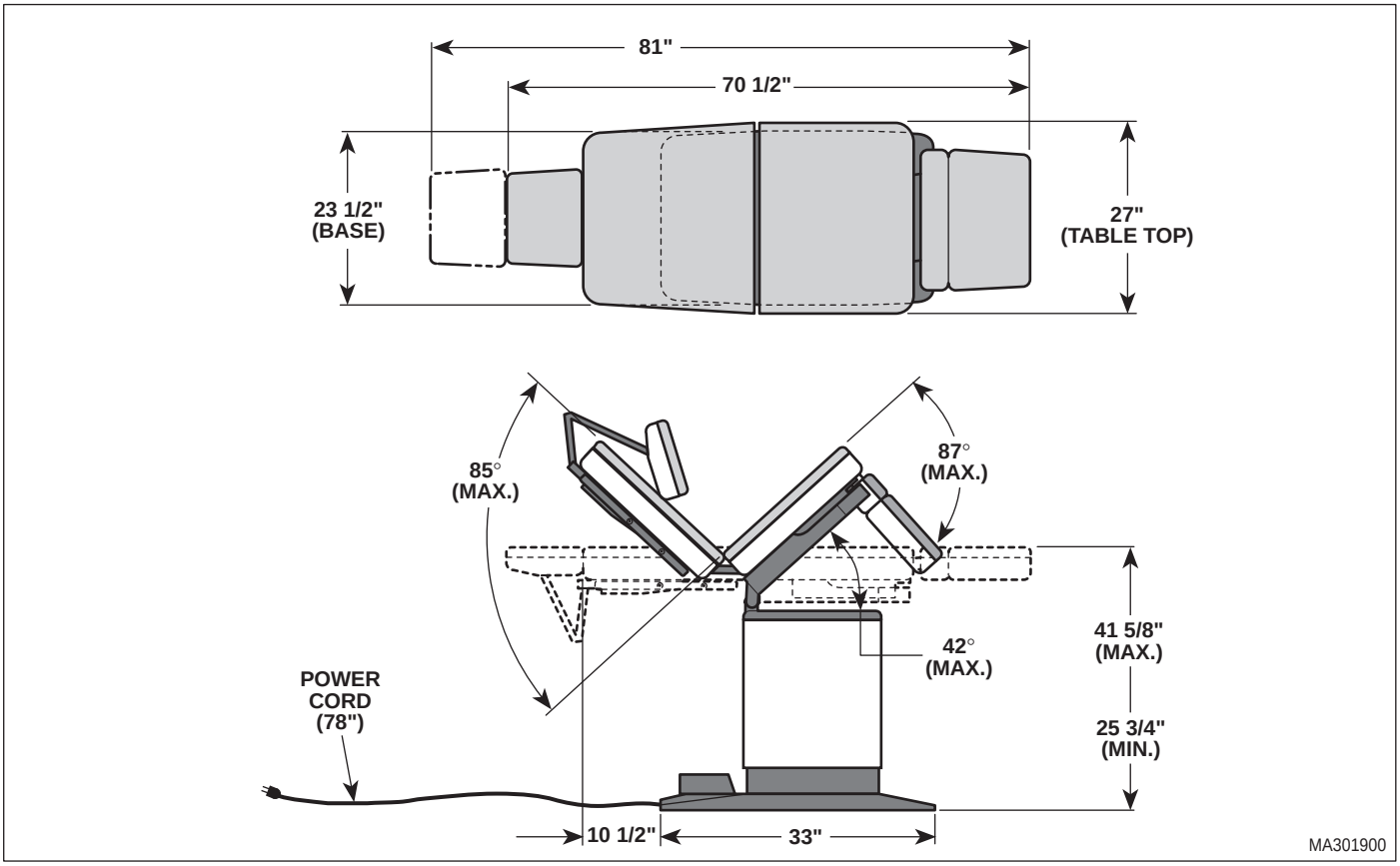

Figure 1-2. Table Dimensions

1.6 Special Tools

Table 1-2 lists all of the special tools needed to repair the table, how to obtain the special tools, and the purpose of each special tool.

Table 1-2. Special Tool List

Description of Special Tool	Manufacturer's Name / Address / Phone	Manufacturer's Part Number	Purpose of Special Tool
Multimeter	Commercially Available	Any Type	Used to perform continuity and voltage checks.
Torque Wrench	Commercially Available	Any Type	Used to tighten nuts or screws to specified values.
Support Bar	Midmark Corporation 60 Vista Drive Versailles, Ohio 45380 (513) 526-3662	051-0412-00	Used to support the weight of the table top so the base actuator may be disconnected from table. Used in base actuator removal and gas spring(s) removal procedures.
Pry Bar	Midmark Corporation 60 Vista Drive Versailles, Ohio 45380 (513) 526-3662	051-0413-00	Used to compress the gas spring(s) so they may be disconnected and removed from table.

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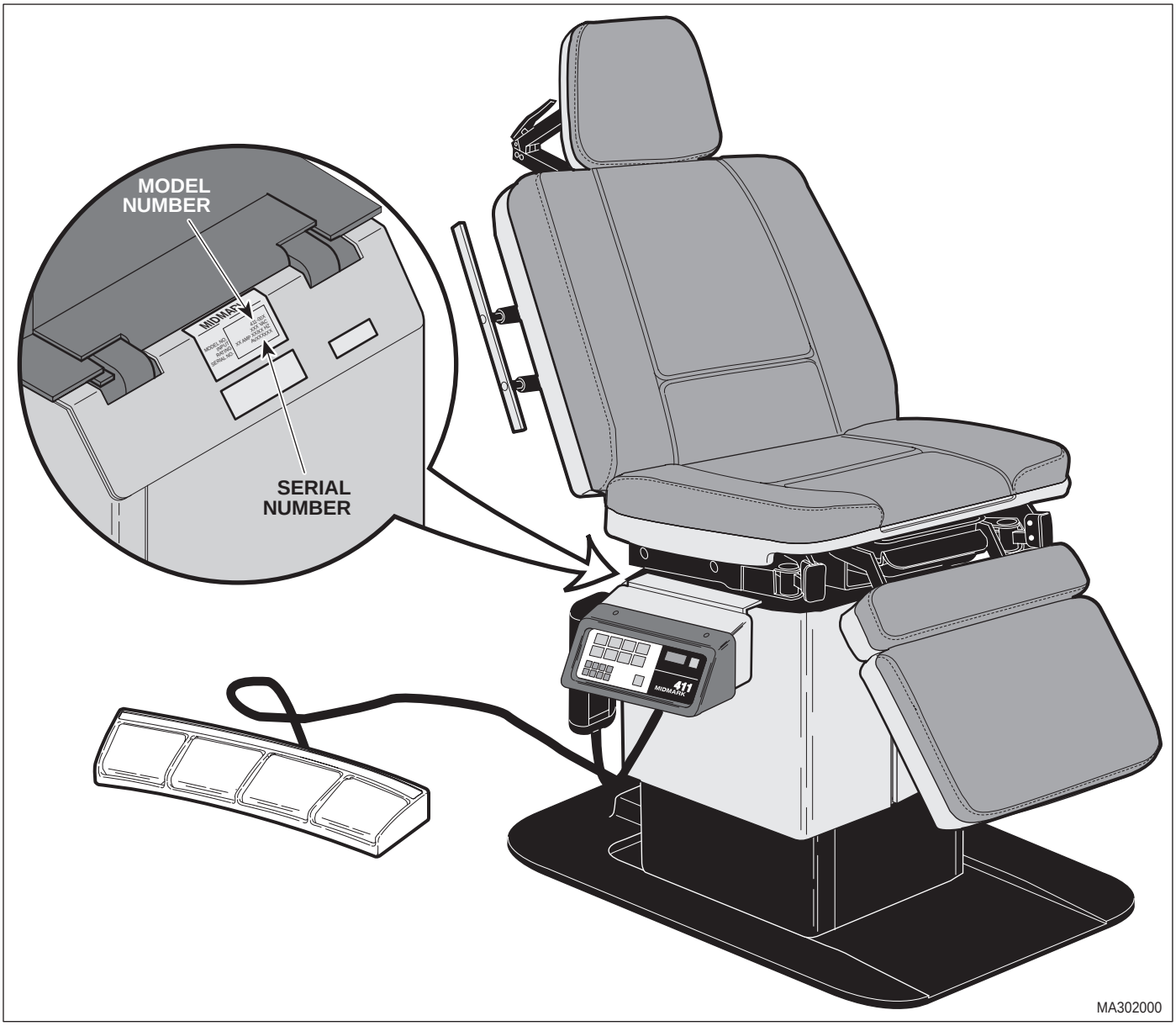

Figure 1-3. Model Number / Serial Number Location

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SECTION II
TESTING AND TROUBLESHOOTING

2.1 Operational Test (See Figure 2-1)

In order to effectively diagnose the malfunction of the table, it may be necessary to perform an operational test as follows:

WARNING
Refer to the Operator Manual for complete instructions on operating the table. Failure to do so could result in personal injury.

NOTE
The Operational Test, for the most part, only describes what should happen when the table is operated. If the table does something other than described, a problem has been discovered. Refer to the Troubleshooting Guide to determine the cause of the problem and its correction.

(1) Plug the table into a grounded, non-isolated, correctly polarized outlet, that has the proper voltage output for the table. See Figure 2-1.

NOTE
The pan slide assembly should be pushed in fully for the following step.

(2) Press TABLE UP, TABLE DOWN, BACK UP, BACK DOWN, TILT UP, TILT DOWN, FOOT UP, and FOOT DOWN buttons on hand control.

(3) Observe. The table top should move in the direction corresponding to the button which is being depressed. No section of the table top should drift on its own after hand control button is released. No actuator assembly should make excessive squealing noises. Movement should be steady and should match the positions and speeds listed below:

Table Positions:

Back Section	0 to 85°
Foot Section	0 to -87°
Tilt Function	0 to 42°
Table Top Height (Adjustable):	25.75 in. to 41.625 in. (65.4 cm to 105.7 cm)

Table Speeds:

TABLE UP	12 +/- 1 seconds
BACK UP	10 +/- 1 seconds
TILT UP	11 +/- 1 seconds
FOOT UP	10 +/- 1 seconds

(4) Repeat steps 2 and 3 on the table's console. If the table has a foot control, repeats steps 2 and 3 for the foot control also.

(5) Lower FOOT DOWN function almost all the way down. Pull the pan slide assembly outward until the pan safety limit switch is no longer tripped. Press FOOT UP and then FOOT DOWN button on hand control.

(6) Observe. The foot section of table top *should not* move when FOOT UP or FOOT DOWN buttons are pressed.

(7) Push pan slide assembly inward until pan safety limit switch is tripped. Press FOOT UP and then FOOT DOWN button on hand control.

(8) Observe. The foot section of table top *should* move when FOOT UP or FOOT DOWN buttons are pressed.

NOTE
Once the PROGRAM button is pressed, the operator has four seconds to press one of the eight PROGRAMMED POSITION buttons.

(9) Press the PROGRAM button followed by the PROGRAMMED POSITION button labeled "1".

(10) Observe. When the PROGRAM button is pressed, the red L.E.D. directly above it should illuminate.

(11) Use the manual positioning buttons to move the table top to a new position.

NOTE
Steps 12 thru 14 check functionality of PROGRAMMED POSITION buttons 1 thru 8 on console.

(12) Press and hold the PROGRAMMED POSITION button "1" (located on console) until the table top stops moving.

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SECTION II
TESTING AND TROUBLESHOOTING

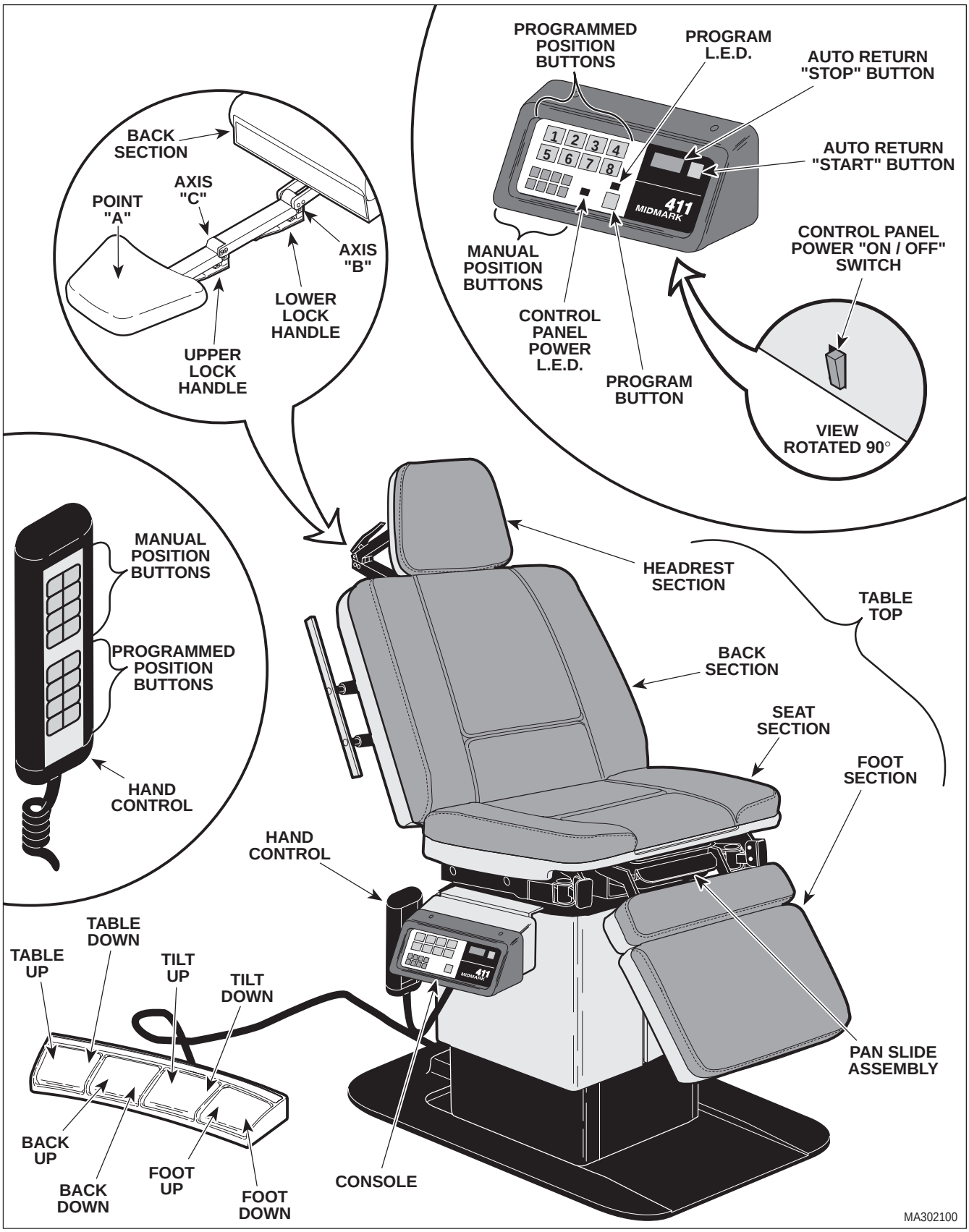

Figure 2-1. Operational Test

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(13) Observe. The table top should move back to the position that was stored into memory of "1" in step 9.

(14) Repeat steps 9 thru 13 to test the PROGRAMMED POSITION buttons "2 thru 8" on the console.

NOTE
Steps 15 thru 17 check functionality of PROGRAMMED POSITION buttons 1 thru 8 on hand control.

(15) Press and hold the PROGRAMMED POSITION button "1" (located on hand control) until the table top stops moving.

(16) Observe. The table top should move back to the position that was stored into memory of "1" in step 9.

(17) Repeat steps 15 and 16 to test the PROGRAMMED POSITION buttons "2 thru 8" on the hand control.

(18) Press the TABLE UP button to run the table top all the way up.

(19) Press the AUTO RETURN "START" button, wait one second, and then press the AUTO RETURN "STOP" button.

(20) The base actuator should begin to lower the table top. When the STOP button is pressed, the base actuator should stop lowering.

(21) Press the AUTO RETURN "START" button and allow the table top to lower all the way down.

(22) Observe. The base actuator should lower the table top all the way down. The base actuator should not continue to run after table top is completely lowered.

(23) Switch the CONTROL PANEL POWER switch to OFF.

(24) Observe. The CONTROL PANEL POWER L.E.D. should extinguish when the switch is switched to OFF.

(25) Press one of the MANUAL POSITION buttons or PROGRAMMED POSITION buttons.

(26) Observe. The table top should not move when a MANUAL POSITION button or PROGRAMMED POSITION button is pressed.

NOTE
Early units have a headrest which has only one locking handle. The procedure is the same otherwise.

(27) Unlock upper lock handle and lower lock handle, position headrest in a horizontal position as shown, and then relock upper lock handle and lower lock handle.

(28) Place a 45 lb (20.4 kg) static load at Point A.

(29) Observe. There should be no movement at Axis B or Axis C when the static load is applied to the headrest. The maximum force required to unclamp a locking handle should be 17 lbs. (7.7 kg) and the maximum force required to clamp a locking handle should be 35 lbs. (15.8 kg).

2.2 Troubleshooting Procedures

Table 2-1 is a Troubleshooting Guide which is used to determine the cause of the malfunction.

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SECTION II
TESTING AND TROUBLESHOOTING

Table 2-1. Troubleshooting Guide

Problem	Symptom	Probable Cause	Check	Correction
Table will not operate when any of the eight up or down functions, auto return, or programmed positions are selected from the hand control or console.	When any hand control or console button is pressed, nothing happens (actuator motor(s) does not run or hum).	Power cord is not plugged into facility wall outlet.	Check to see if power cord is plugged in.	Plug power cord into facility wall outlet.
		CONTROL PANEL POWER switch is OFF.	Check to see if CONTROL PANEL POWER switch is ON. CONTROL PANEL POWER L.E.D. should illuminate to indicate switch is ON.	Turn CONTROL PANEL POWER switch to ON. Inform operator on use of the switch. If the table does not work even when the switch is in ON position, replace PC logic board. Refer to para 4.6.
		Facility circuit breaker providing power to table is tripped.	Check to see if facility circuit breaker is tripped. One way of checking this is to plug a lamp into wall outlet that table was plugged into.	If circuit breaker is tripped, determine what caused circuit breaker to trip, correct the problem, and then reset / replace circuit breaker.
		Wire connections loose.	Check all wiring connections from power cord to terminal block and from terminal block to interface board. Perform continuity check on wires. Use multimeter to check for proper voltage levels.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections.
		0.15 amp transformer primary fuse on interface board is blown.	Refer to Figure 5-1 or 5-2 for this check. Perform continuity check on primary fuse.	Replace blown primary fuse. See Figure 5-1 or 5-2 for location of fuse.
		Interface board is malfunctioning.	Replace suspect interface board with known working interface board.	Replace interface board. Refer to para 4.4 or 4.5.
		PC logic board is malfunctioning.	Replace suspect PC logic board with known working PC logic board.	Replace PC logic board. Refer to para 4.6.
	Nothing happens when a hand control or console button is pressed, but table runs when a foot control switch is depressed.	PC logic board is malfunctioning.	Replace suspect PC logic board with known working PC logic board.	Replace PC logic board. Refer to para 4.6.

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Table 2-1. Troubleshooting Guide - Continued

Problem	Symptom	Probable Cause	Check	Correction
One or more functions cannot be initiated from the hand control.	Some functions may be initiated from the hand control, but at least one may not. All functions can be initiated from the console.	Hand control panel of hand control is malfunctioning (switch membrane is malfunctioning).	Replace suspect hand control panel with known working hand control panel.	Replace hand control panel. Refer to para 4.8.
		Hand control board is malfunctioning.	Replace suspect hand control board with known working hand control board.	Replace hand control board. Refer to para 4.8.
		Hand control coil cord has bad connection or there is a break in coil cord.	Replace suspect coil cord with known working coil cord.	Replace coil cord.
One or more functions cannot be initiated from the console.	Some functions may be initiated from the console, but at least one may not. All functions can be initiated from the hand control.	Program panel is malfunctioning (switch membrane is malfunctioning).	Replace suspect program panel with known working program panel.	Replace program panel. Refer to para 4.7.
		Program panel interface board is malfunctioning.	Replace suspect program panel interface board with known working program panel interface board.	Replace program panel interface board. Refer to para 4.7.
		Wire connections loose.	Check all wiring connections from program panel to program panel interface board to PC logic board. Perform continuity check on wires. Use multimeter to check for proper voltage levels.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections.
One or more functions cannot be initiated from the optional foot control.	Some functions may be initiated from the foot control, but at least one may not. All functions can be initiated from the hand control and console.	Foot switch for non-operable function is malfunctioning.	Perform a continuity check on suspect foot switch.	Replace foot switch. Refer to para 4.27.
		Wire connections loose.	Check all wiring connections from foot control to interface board. Perform continuity check on wires. Use multimeter to check for proper voltage levels.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections.

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SECTION II
TESTING AND TROUBLESHOOTING

Table 2-1. Troubleshooting Guide - Continued

Problem	Symptom	Probable Cause	Check	Correction
BACK UP and BACK DOWN functions do not work. All other functions work.	When BACK UP and BACK DOWN buttons are pressed, the table will not move (all other functions work).	BACK capacitor is weak or blown.	Replace suspect back capacitor with known working back capacitor.	Replace back capacitor. Refer to para 4.10.
		Thermal overload switch in back actuator is activated.	-	Wait 10 to 20 minutes to allow back actuator motor to cool.
		5 amp BACK fuse for BACK UP and BACK DOWN functions is blown (located on interface board).	Refer to Figure 2-2 for this check. Perform a continuity check on 5 amp BACK fuse.	Replace blown BACK fuse. See Figure 5-1 or 5-2 for location of fuse.
		Back actuator assembly is malfunctioning.	Replace suspect back actuator assembly with known working back actuator assembly.	Replace actuator motor or back actuator assembly. Refer to para 4.21 or 4.12.
		Wire connections loose.	Check all wiring connections to back actuator assembly.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections.
		Interface board is malfunctioning	Replace suspect interface board with known working interface board.	Replace interface board. Refer to para 4.4 or 4.5.
TILT UP and TILT DOWN functions do not work. All other functions work.	When TILT UP and TILT DOWN buttons are pressed, the table will not move (all other functions work).	Tilt capacitor is weak or blown.	Replace suspect tilt capacitor with known working tilt capacitor.	Replace tilt capacitor. Refer to para 4.10.
		Thermal overload switch in tilt actuator is activated.	-	Wait 10 to 20 minutes to allow tilt actuator motor to cool.
		5 amp TILT fuse for TILT UP and TILT DOWN functions is blown (located on interface board).	Refer to Figure 5-1 or 5-2 for this check. Perform a continuity check on 5 amp TILT fuse.	Replace blown TILT fuse. See Figure 5-1 or 5-2 for location of fuse.
		Tilt actuator assembly is malfunctioning.	Replace suspect tilt actuator assembly with known working tilt actuator assembly.	Replace actuator motor or tilt actuator assembly. Refer to para 4.21 or 4.16.
		Wire connections loose.	Check all wiring connections to tilt actuator assembly.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections.
		Interface board is malfunctioning	Replace suspect interface board with known working interface board.	Replace interface board. Refer to para 4.4 or 4.5.

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Table 2-1. Troubleshooting Guide - Continued

Problem	Symptom	Probable Cause	Check	Correction
TABLE UP and TABLE DOWN functions do not work. All other functions work.	When TABLE UP and TABLE DOWN buttons are pressed, the table will not move (all other functions work).	Base capacitor is weak or blown.	Replace suspect base capacitor with known working base capacitor.	Replace base capacitor. Refer to para 4.10.
		Thermal overload switch in base actuator is activated.	-	Wait 10 to 20 minutes to allow base actuator motor to cool.
		5 amp TABLE fuse for TABLE UP and TABLE DOWN functions is blown (located on interface board).	Refer to Figure 2-2 for this check. Perform a continuity check on 5 amp TABLE fuse.	Replace blown TABLE fuse. See Figure 5-1 or 5-2 for location of fuse.
		Base actuator assembly is malfunctioning.	Replace suspect base actuator assembly with known working base actuator assembly.	Replace actuator motor or base actuator assembly. Refer to para 4.21 or 4.18.
		Wire connections loose.	Check all wiring connections to base actuator assembly.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections.
		Interface board is malfunctioning	Replace suspect interface board with known working interface board.	Replace interface board. Refer to para 4.4 or 4.5.
FOOT UP and FOOT DOWN functions do not work. All other functions work.	When FOOT UP and FOOT DOWN buttons are pressed, the table will not move (all other functions work).	Pan holder assembly is not pushed in all the way; therefore the pan safety limit switch is not tripped.	Check that pan holder assembly is pushed in all the way.	Push pan holder assembly in all the way. Inform operator on how the pan safety limit switch works.
		Foot capacitor is weak or blown.	Replace suspect foot capacitor with known working foot capacitor.	Replace foot capacitor. Refer to para 4.10.
		Thermal overload switch in foot actuator is activated.	-	Wait 10 to 20 minutes to allow foot actuator motor to cool.
		5 amp FOOT fuse for FOOT UP and FOOT DOWN functions is blown (located on interface board).	Refer to Figure 2-2 for this check. Perform a continuity check on 5 amp FOOT fuse.	Replace blown FOOT fuse. See Figure 5-1 or 5-2 for location of fuse.
		Foot actuator assembly is malfunctioning.	Replace suspect foot actuator assembly with known working foot actuator assembly.	Replace actuator motor or foot actuator assembly. Refer to para 4.21 or 4.14.
		Wire connections loose.	Check all wiring connections to base actuator assembly.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections.
		Interface board is malfunctioning	Replace suspect interface board with known working interface board.	Replace interface board. Refer to para 4.4 or 4.5.

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Table 2-1. Troubleshooting Guide - Continued

Problem	Symptom	Probable Cause	Check	Correction
FOOT UP and FOOT DOWN functions do not work. All other functions work - Continued.	When FOOT UP and FOOT DOWN buttons are pressed, the table will not move (all other functions work) - Continued.	Pan safety switch is out of adjustment.	Check to see if pan safety limit switch is being tripped by pan holder assembly.	Adjust pan safety limit switch so it is tripped when pan holder assembly is pushed in all the way.
		Pan safety limit switch is malfunctioning.	Perform continuity check on pan safety limit switch (switch tripped = closed).	Replace pan safety limit switch. Refer to para 4.9.
BACK UP function works, but BACK DOWN function does not or BACK DOWN function works, but BACK UP function does not. All other functions work.	One function operates properly, but the other does not.	Wire connections loose.	Check all wiring connections to back actuator assembly.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections.
		Interface board is malfunctioning (relay for up or down function is malfunctioning).	Replace suspect interface board with known working interface board.	Replace interface board. Refer to para 4.4 or 4.5.
		Back actuator assembly is malfunctioning.	Replace suspect back actuator assembly with known working back actuator assembly.	Replace actuator motor or back actuator assembly. Refer to para 4.21 or 4.12.
TILT UP function works, but TILT DOWN function does not or TILT DOWN function works, but TILT UP function does not. All other functions work.	One function operates properly, but the other does not.	Wire connections loose.	Check all wiring connections to tilt actuator assembly.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections.
		Interface board is malfunctioning (relay for up or down function is malfunctioning).	Replace suspect interface board with known working interface board.	Replace interface board. Refer to para 4.4 or 4.5.
		Tilt actuator assembly is malfunctioning.	Replace suspect tilt actuator assembly with known working tilt actuator assembly.	Replace actuator motor or tilt actuator assembly. Refer to para 4.21 or 4.16.
TABLE UP function works, but TABLE DOWN function does not or TABLE DOWN function works, but TABLE UP function does not. All other functions work.	One function operates properly, but the other does not.	Wire connections loose.	Check all wiring connections to base actuator.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections.
		Interface board is malfunctioning (relay for up or down function is malfunctioning).	Replace suspect interface board with known working interface board.	Replace interface board. Refer to para 4.4 or 4.5.
		Base actuator assembly is malfunctioning.	Replace suspect base actuator assembly with known working base actuator assembly.	Replace actuator motor or base actuator assembly. Refer to para 4.21 or 4.18.
	TABLE UP does not work, but TABLE DOWN does	Gas spring(s) are weak.	Replace suspect gas spring(s) with known working gas spring(s)	Replace gas spring(s). Refer to para 4.19.

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Table 2-1. Troubleshooting Guide - Continued

Problem	Symptom	Probable Cause	Check	Correction
FOOT UP function works, but FOOT DOWN function does not or FOOT DOWN function works, but FOOT UP function does not. All other functions work.	One function operates properly, but the other does not.	Wire connections loose.	Check all wiring connections to foot actuator assembly.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections.
		Interface board is malfunctioning (relay for up or down function is malfunctioning).	Replace suspect interface board with known working interface board.	Replace interface board. Refer to para 4.4 or 4.5.
		Foot actuator assembly is malfunctioning.	Replace suspect foot actuator assembly with known working foot actuator assembly.	Replace actuator motor or foot actuator assembly. Refer to para 4.21 or 4.14.
Programming function is malfunctioning.	A table position cannot be programmed into memory.	The receiver and transmitter for a function are not properly aligned or are malfunctioning, resulting in a lost signal.	Refer to Figure 5-1or 5-2 for this check. Check L.E.D. (D1-Base, D2-Foot, D3-Back, and D4-Tilt) on PC logic board. If L.E.D. is illuminated, transmitter or receiver for that function could be out of alignment. Align the receiver and transmitter for a function and then see if the table goes to the proper position when a PROGRAMMED POSITION button is pressed.	Align the receiver and transmitter of a function. If this does not correct problem, replace receiver and transmitter for the suspect function. Refer to para 4.11 for back function, para 4.13 for foot function, para 4.15 for tilt function, para 4.17 for base function.
		RF cables for receiver and transmitter are shorted or open.	Perform continuity check on RF cables.	Replace any damaged RF cables.
		Program panel is malfunctioning (switch membrane is malfunctioning).	Replace suspect program panel with known working program panel.	Replace program panel. Refer to para 4.7.
		Program panel interface board is malfunctioning.	Replace suspect program panel interface board with known working program panel interface board.	Replace program panel interface board. Refer to para 4.7.
		PC logic board is malfunctioning.	Replace suspect PC logic board with known working PC logic board.	Replace PC logic board. Refer to para 4.6.

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SECTION II
TESTING AND TROUBLESHOOTING

Table 2-1. Troubleshooting Guide - Continued

Problem	Symptom	Probable Cause	Check	Correction
Programming function is malfunctioning - Continued.	When a PROGRAMMED POSITION button is pressed, the table top does not move to the proper position that was stored in memory.	The receiver and transmitter for a function are not properly aligned or are malfunctioning, resulting in a lost signal.	Refer to Figure 2-1 for this check. Check L.E.D. (D1-Base, D2-Foot, D3-Back, and D4-Tilt) on PC logic board. If L.E.D. is illuminated, transmitter or receiver for that function could be out of alignment. Align the receiver and transmitter for a function and then see if the table goes to the proper position when a PROGRAMMED POSITION button is pressed.	Align the receiver and transmitter of a function. If this does not correct problem, replace receiver and transmitter for the suspect function. Refer to para 4.11 for back function, para 4.13 for foot function, para 4.15 for tilt function, para 4.17 for base function.
		The receiver or transmitter for a function is malfunctioning, but its L.E.D. indicator light is not illuminated on the interface board.	Replace suspect receiver and transmitter with known working receiver and transmitter.	Replace receiver and transmitter for suspect function. Refer to para 4.11 for back function, para 4.13 for foot function, para 4.15 for tilt function, para 4.17 for base function.
		PC logic board is malfunctioning.	Replace suspect PC logic board with known working PC logic board.	Replace PC logic board. Refer to para 4.6.
AUTO RETURN function does not work.	When AUTO RETURN “START” button is pressed, nothing happens.	Program panel is malfunctioning (switch membrane is malfunctioning).	Replace suspect program panel with known working program panel.	Replace program panel. Refer to para 4.7.
		Program panel interface board is malfunctioning.	Replace suspect program panel interface board with known working program panel interface board.	Replace program panel interface board. Refer to para 4.7.
		Base down limit switch is malfunctioning (stuck open).	Perform continuity check on base down limit switch.	Replace base down limit switch. Refer to para 4.20.
	After base actuator has lowered table top all the way down, the base actuator continues to run.	Base down limit switch is out of adjustment.	Check adjustment of base down limit switch.	Adjust base down limit switch. Refer to para 4.20.
		Base down limit switch is malfunctioning (stuck closed).	Perform continuity check on base down limit switch.	Replace base down limit switch. Refer to para 4.20.
The Base, Tilt, Back, or Foot function drifts by itself.	Function operates properly otherwise.	Motor actuator brake is malfunctioning.	Replace suspect actuator brake components with new components.	Replace actuator brake components. Refer to para 4.21.

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Table 2-1. Troubleshooting Guide - Continued

Problem	Symptom	Probable Cause	Check	Correction
Table moves fine for light patient, but will not move or moves slowly for very heavy patient.	Heavy patients cause table to malfunction.	Low voltage is being supplied to table.	Check voltage at wall receptacle - should be 115 +/- 5 VAC.	Correct low voltage situation at wall receptacle.
		Gas spring(s) are weak.	Replace suspect gas spring(s) with known working gas spring(s).	Replace gas spring(s). Refer to para 4.19.
		Table overloaded with too heavy of a patient.	Maximum weight capacity of table is 300 lbs (136.0 kg).	Inform table operator of weight limitation.
		Capacitor for suspect function is weak.	Replace suspect capacitor with known working capacitor.	Replace capacitor.
Whirling or squeaking noise is heard when an actuator assembly is being run.	Noisy actuator.	Foreign matter on ball screw threads and / or lack of lubricant.	Check for foreign matter on ball screw threads. Check for lack of lubricant on ball screw threads.	Clean all foreign matter off of ball screw threads. Coat ball screw threads with STP treatment oil or equivalent. If actuator assembly is still noisy, replace it.
Excessive sideways play of table top.	Table is not stable and can be moved from side to side.	Chain assemblies are loose.	Check tension of chain assemblies.	Adjust tension of chain assemblies. Refer to para 4.22.
		Base slide assembly is worn or deformed.	Check condition of base slide assembly.	Replace base slide assembly.
		Table base is not resting firmly on floor.	Check to verify all four leveling screws are contacting the floor.	Adjust the leveling screws; there is one located under each corner of the base.
Headrest is not operating properly.	Headrest drifts downward while supporting patients head.	Headrest is out of adjustment.	Check adjustment of headrest.	Adjust headrest. Refer to para 4.23 or 4.25.
	Headrest locking handles pop out of locked position.	Headrest handles handle stops need adjusted.	Check adjustment of headrest handles handle stops.	Adjust headrest handles handle stops. Refer to para 4.24 or 4.26.
Stirrups are malfunctioning.	Stirrups do not lock into one of the three positions properly.	Stirrup index pin needs replaced.	Check for damaged parts.	Replace stirrup index pin or any other necessary components. Refer to para 4.28.

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SECTION III
SCHEDULED MAINTENANCE

3.1 Scheduled Maintenance

Table 3-1 is a Scheduled Maintenance Chart which lists the inspections and services that should be performed periodically on the table. These inspections and services should be performed as often as indicated in the chart.

Table 3-1. Scheduled Maintenance Chart

Interval	Inspection or Service	What to Do
Semi-annually	Obvious damage	Visually check condition of table for obvious damage such as: cracks in components, missing components, dents in components, or any other visible damage which would cause table to be unsafe to operate or would compromise its performance. Repair table as necessary.
	Fasteners / hardware	Check table for missing or loose fasteners / hardware. Replace any missing hardware and tighten any loose hardware as necessary.
	Warning and instructional decals	Check for missing or illegible decals. Replace decals as necessary.
	Pivot points / moving parts / accessories	Lubricate all exposed pivot points, moving parts, and accessories with silicone based lubricant.
	Hand control	Check that hand control works correctly. Make sure all switch membranes work correctly. If necessary, replace hand control panel. Refer to para 4.8.
	Program panel	Check that program panel works correctly. Make sure all switch membranes work correctly. If necessary, replace program panel. Refer to para 4.7.
	Foot control (optional)	Check that foot control works correctly. Make sure all footswitches operate properly. Replace any malfunctioning footswitches. Refer to para 4.27.
	Ball screws of actuator assemblies	Extend each actuator assembly and wipe ball screw threads down with a rag to remove foreign matter. Coat as much of the ball screw threads as possible with STP treatment oil or equivalent. Run each actuator assembly to both ends of its travel a couple of times to spread the oil evenly over all of the ball screw threads and then remove excess oil. If oil does not correct a squealing actuator assembly, replace actuator assembly.
	Drifting of actuator assemblies	Check each actuator assembly for drift. Replace actuator assembly brake components as necessary. Refer to para 4.21.
	Foot extension	Check that foot extension can be easily removed. Make sure foot section is latched securely in place when installed.
	Stirrup assemblies	Check that stirrup assemblies lock into one of three positions. Check for wear. Replace worn components as necessary. Refer to para 4.28.
	Pan safety limit switch	Check that pan safety limit switch is tripped when pan assembly is in fully stowed position. Adjust or replace pan safety limit switch if necessary. Refer to para 4.9.
	Excessive play in column assembly	Check that column assembly does not have excessive side to side play. If necessary, tighten chain. Refer to para 4.22. If this does not correct problem, replace base slide assembly.
	Head rest	Check that head rest is adjusted properly and will not drift downward on its own under 45 lbs (20.4 kg) of static weight. If necessary, adjust head rest. Refer to para 4.23 or 4.25
	Electrical receptacle (Domestic units only)	Check that the electrical receptacle is functioning properly. Replace receptacle as necessary.
	Upholstery	Check all upholstery for rips, tears, or excessive wear. Replace cushions as necessary.
	Accessories	Check that all accessories have all of their components and that they function properly. If necessary, repair or replace the accessory.
	Operational Test	Perform an Operational Test to determine if the table is operating within its specifications (Refer to para 2.1). Replace or adjust any malfunctioning components.

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SECTION IV
MAINTENANCE / SERVICE INSTRUCTIONS

4.1 Introduction

WARNING
Refer to the Operator Manual for complete instructions on operating the table. Failure to do so could result in personal injury.

NOTE
Perform an operational test on the table after the repair is completed to confirm the repair was properly made and that *all* malfunctions were repaired.

The following paragraphs contain removal, installation, repair, and adjustment procedures for the table.

4.2 Shrouds Removal / Installation (Applies to Units With Serial Numbers AV-1000 Thru AV2888)

A. Removal

(1) If possible, raise TILT UP function all the way up.

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug table power cord from wall outlet.

NOTE
Remove guide weldment (5) from side of table which does not have operator's console. Also, early units do not have access holes with plugs (1).

(3) Remove two plugs (1, Figure 4-1) from access holes; then remove two screws (2), lockwashers (3), two screws (4) and guide weldment (5) from seat weldment (6).

(4) Remove six screws (7) securing R.H. and L.H. shrouds (8) together.

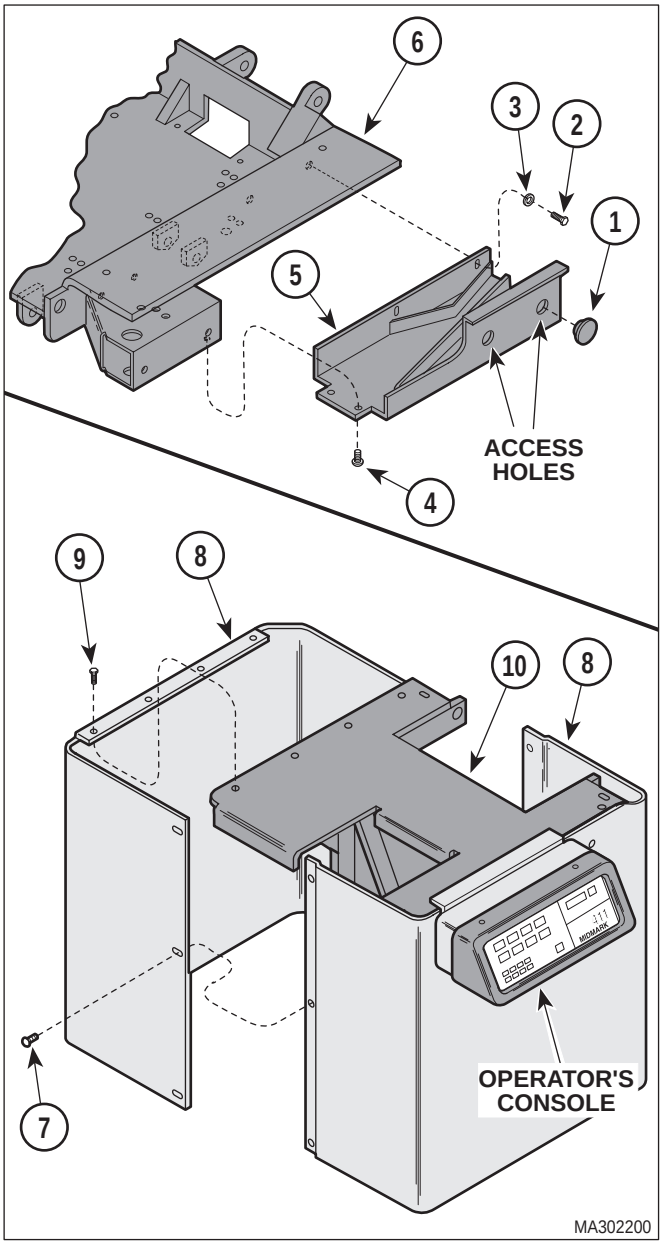

Figure 4-1. Shrouds Removal / Installation

NOTE
Remove shroud from side of table which does not have operator's console.

(5) Remove two screws (9) and either L.H. or R.H. shroud (8) from inner member weldment (10).

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B. Installation

(1) Coat threads of two screws (9) with removable threadlocking adhesive (Loctite 242).

(2) Install shroud (8) on inner member weldment (10) and secure with two screws (9).

(3) Secure L.H. and R.H. shrouds (8) together with six screws (7).

(4) Install guide weldment (5) on seat weldment (6) and secure with two screws (4), lockwashers (3), and screws (2).

NOTE
Early units do not have access holes with plugs.

(5) Install two plugs (1) in access holes.

(6) Plug table power cord into wall outlet.

4.3 Shrouds Removal / Installation (Applies to Units With Serial Numbers AV-2889 Thru Present and DJ-1000 Thru Present)

A. Removal

(1) If possible, raise TILT UP function all the way up.

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug table power cord from wall outlet.

(3) Remove six screws (1, Figure 4-2) and cover (2) from R.H. and L.H. shrouds (3).

(4) Remove three screws (4) securing R.H. and L.H. shrouds (3) together.

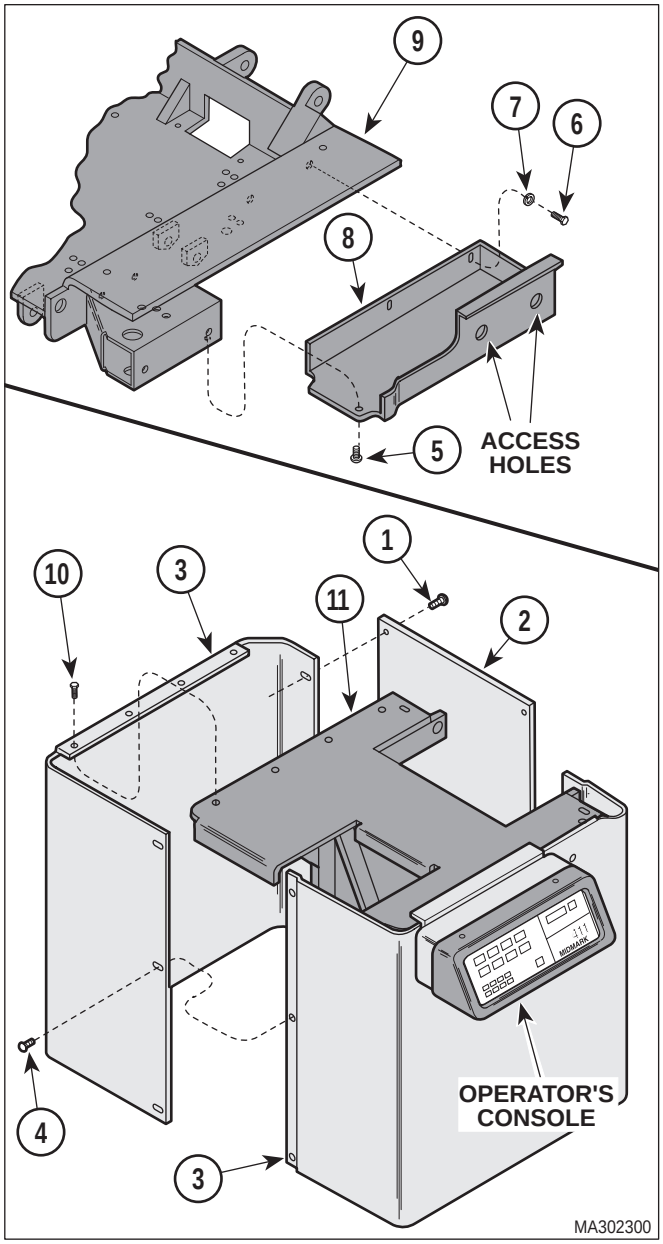

Figure 4-2. Shrouds Removal / Installation

NOTE
Remove stirrup housing from side of table which does not have operator's console.

(5) Remove one screw (5), two screws (6), lockwashers (7), and stirrup housing (8) from seat weldment (9).

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NOTE
Remove shroud from side of table which does not have operator's console.

(6) Remove two screws (10) and either L.H. or R.H. shroud (3) from inner member weldment (11).

B. Installation

(1) Coat threads of two screws (10) with removable threadlocking adhesive (Loctite 242).

(2) Install shroud (3) on inner member weldment (11) and secure with two screws (10).

(3) Secure L.H. and R.H. shrouds (3) together with three screws (4).

(4) Install stirrup housing (8) on seat weldment (9) and secure with two lockwashers (7), screws (6), and one screw (5).

(5) Install cover (2) on R.H. and L.H. shrouds (3) and secure with six screws (1).

(6) Plug table power cord into wall outlet.

4.4 Interface Board Removal / Installation (Early Units)

NOTE
This procedure applies to units with Serial Number AV-1000 Thru AV-2217 and also AV-2229, AV-2231, AV-2236, AV-2238, AV-2244, AV-2247, and AV-2248.

A. Removal

(1) If possible, raise TABLE UP function all the way up.

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug table power cord from wall outlet.

(3) If TABLE UP function cannot be raised all the way up, remove shrouds (Refer to para 4.2 or 4.3).

(4) Remove two screws (1, Figure 4-3) and back lower shroud (2) from L.H. and R.H support channels (3).

(5) Tag and disconnect four wire harnesses (4) from connectors of interface board (5).

(6) Tag and disconnect three wires (6) from terminals of interface board (5).

(7) Remove four screws (7), starwashers (8), interface board (5), and spacers (9) from brace (10).

B. Installation

NOTE
Four new standoffs, starwashers, and screws are supplied with the new interface board kit.

(1) Install four new standoffs (11) on brace (10) by installing standoffs into original mounting holes for interface board.

(2) Install interface board (5) on standoffs (11) and secure with four starwashers (8) and new screws (7).

(3) Connect three wires (6) to terminals of interface board (5).

(4) Connect four wire harnesses (4) to connectors of interface board (5).

(5) Install back lower shroud (2) on L.H. and R.H. support channels (3) and secure with two screws (1), making sure locator pins are inserted thru locator holes of back lower shroud.

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SECTION IV
MAINTENANCE / SERVICE

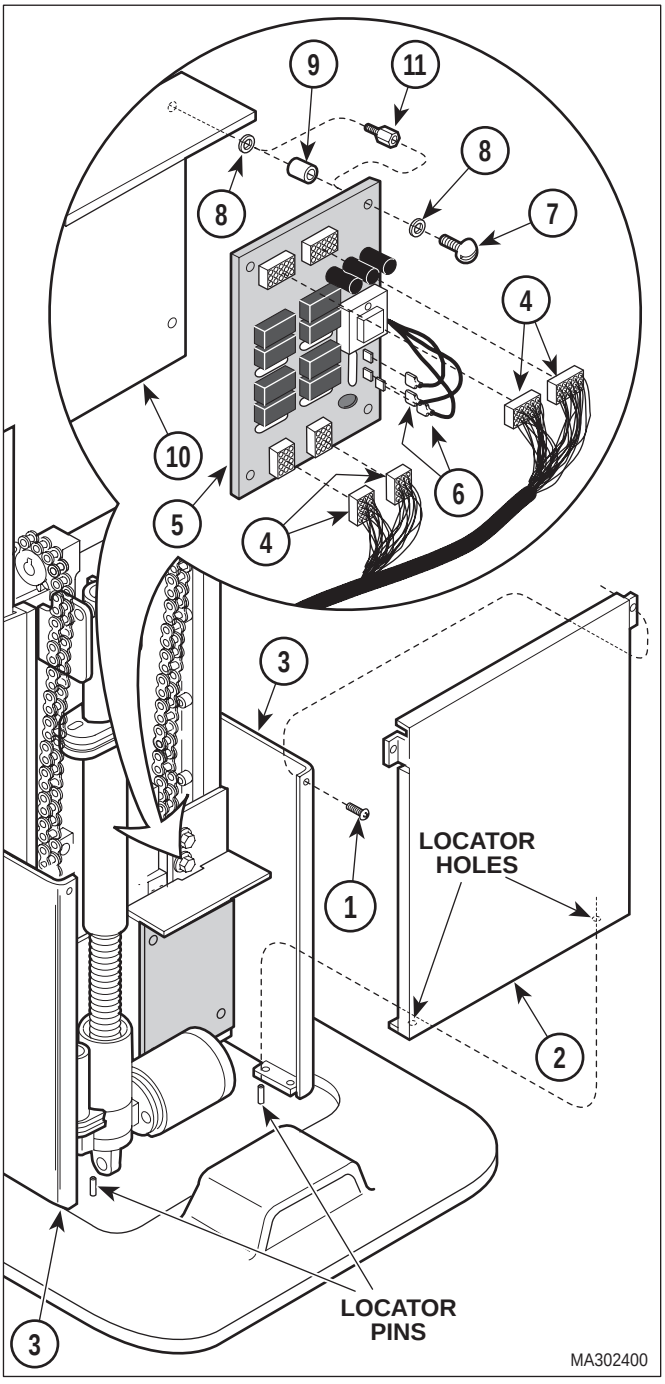

Figure 4-3. Interface Board Removal / Installation

NOTE
The console cover is hinged. After removing two screws (3), the front edge of the console cover may be lowered.

(6) Remove two screws (1, Figure 4-4) and lower the console cover (2) down.

(7) Check Midmark part number on PC logic board (3). If part number is *015-0460-00 Revision A* or *015-0460-00 Revision B*, install adapter as described in steps 8 thru 10. If part number is *015-0460-00 Revision C or later*, do not install adapter; go to step 11.

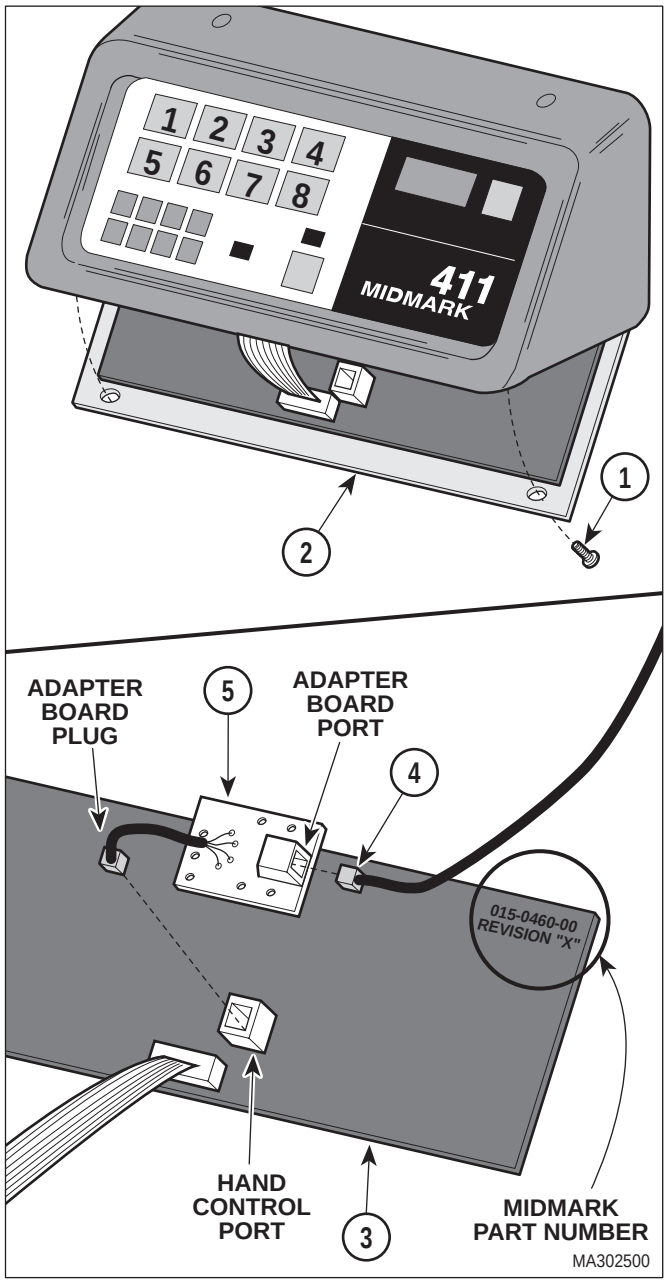

Figure 4-4. Adapter Board Installation

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(8) Disconnect modular cord (4) from hand control port of PC logic board (3).

NOTE
Adapter board is supplied with the interface board kit.

(9) Connect plug of adapter board (5) into hand control port of PC logic board (3).

(10) Plug modular cord (4) into port of adapter board (5).

(11) Close console cover (2) and secure in this position with two screws (1).

(12) If removed, install shrouds (Refer to para 4.2 or 4.3).

(13) Plug table power cord into wall outlet.

4.5 Interface Board Removal / Installation (Later Units)

NOTE
This procedure applies to units with Serial Number AV-2218 Thru Present and DJ-1000 Thru Present with the following exceptions: AV-2229, AV-2231, AV-2236, AV-2238, AV-2244, AV-2247, and AV-2248.

A. Removal

(1) If possible, raise TABLE UP function all the way up.

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug table power cord from wall outlet.

(3) If TABLE UP function cannot be raised all the way up, remove shrouds (Refer to para 4.2 or 4.3).

(4) Remove two screws (1, Figure 4-5) and back lower shroud (2) from L.H. and R.H support channels (3).

(5) Tag and disconnect four wire harnesses (4) from connectors of interface board (5).

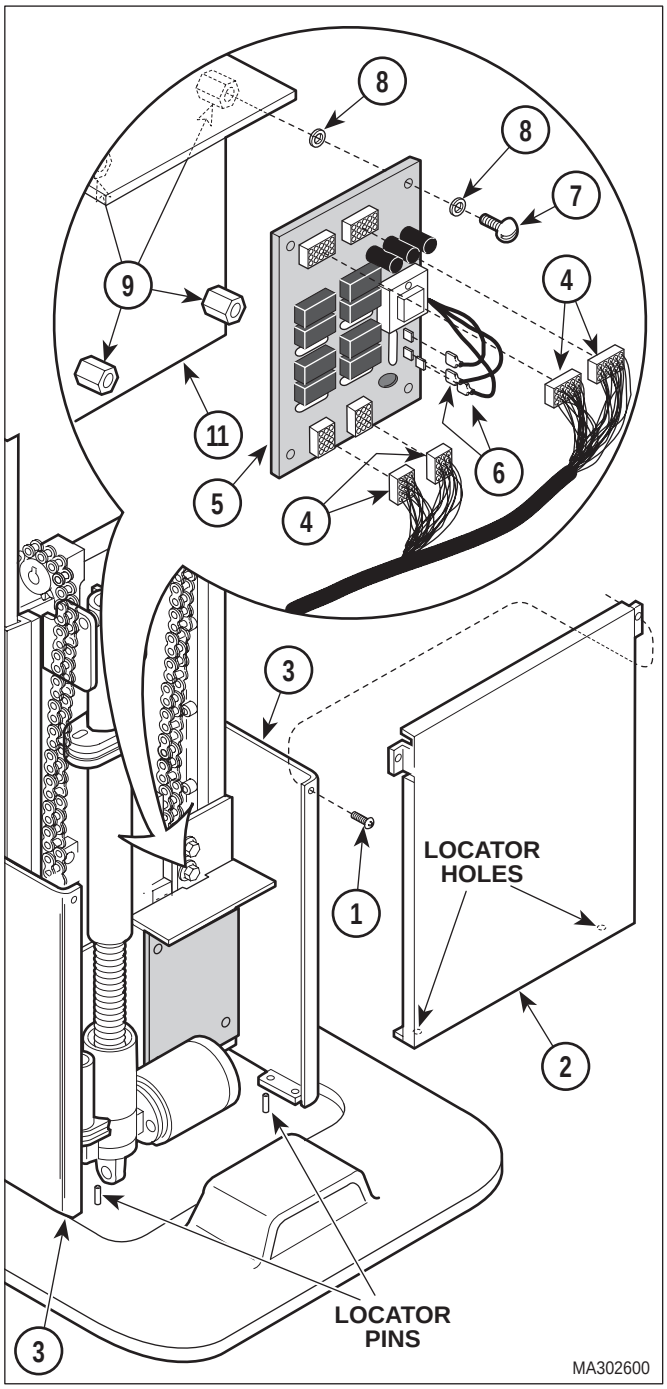

Figure 4-5. Interface Board Removal / Installation

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(6) Tag and disconnect three wires (6) from terminals of interface board (5).

(7) Remove four screws (7), eight starwashers (8), and interface board (5) from standoffs (9).

B. Installation

(1) Install interface board (5) on standoffs (9) and secure with eight starwashers (8) and screws (7).

(2) Connect three wires (6) to terminals of interface board (5).

(3) Connect four wire harnesses (4) to connectors of interface board (5).

(4) Install back lower shroud (2) on L.H. and R.H. support channels (3) and secure with two screws (1), making sure locator pins are inserted thru locator holes of back lower shroud.

(5) If removed, install shrouds (Refer to para 4.2 or 4.3).

(6) Plug table power cord into wall outlet.

4.6 PC Logic Board Removal / Installation

A. Removal

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(1) Unplug table power cord from wall outlet.

(2) Disconnect hand control coil cord (1, Figure 4-6) from hand control port of PC logic board (2).

NOTE
The console cover is hinged. After removing two screws, console cover should be able to be lowered.

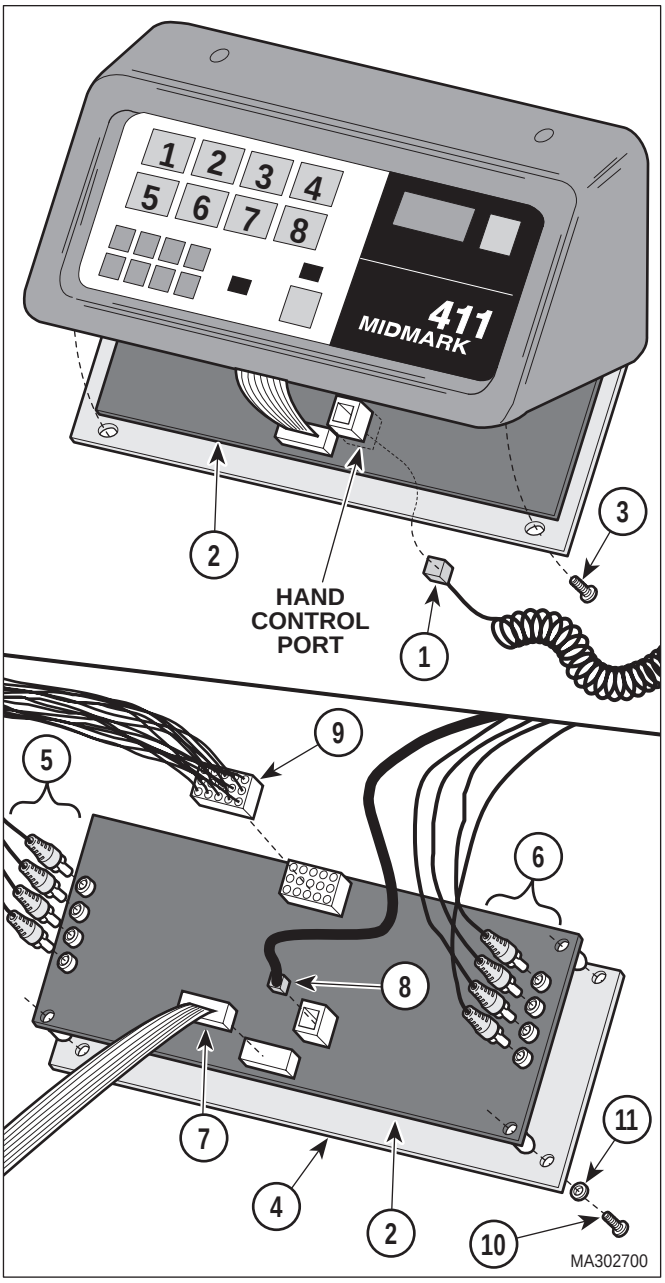

Figure 4-6. PC Logic Board Removal / Installation

(3) Remove two screws (3) and then lower console cover (4).

(4) Tag and disconnect four transmitter wires (5) from PC logic board (2).

(5) Tag and disconnect four receiver wires (6) from PC logic board (2).

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(6) Disconnect ribbon connector (7), modular cord (8), and wire harness (9) from PC logic board (2).

(7) Remove four screws (10), starwashers (11), and PC logic board (2) from console cover (4).

B. Installation

(1) Install PC logic board (2) on console cover (4) and secure with four starwashers (11) and screws (10).

(2) Connect wire harness (9), modular cord (8), and ribbon connector (7) to PC logic board (2).

(3) Connect four receiver wires (6) to PC logic board (2).

(4) Connect four transmitter wires (5) to PC logic board (2).

(5) Close console cover (4) and secure in this position with two screws (3).

(6) Connect hand control coil cord (1) to hand control port of PC logic board (2).

(7) Plug table power cord into wall outlet.

4.7 Program Panel or Program Panel Interface Board Removal / Installation

A. Removal

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(1) Unplug table power cord from wall outlet.

(2) Remove four screws (1, Figure 4-7) and bezel (2) from console weldment (3).

(3) Remove six screws (4) and partially remove program panel (5) from console weldment (3).

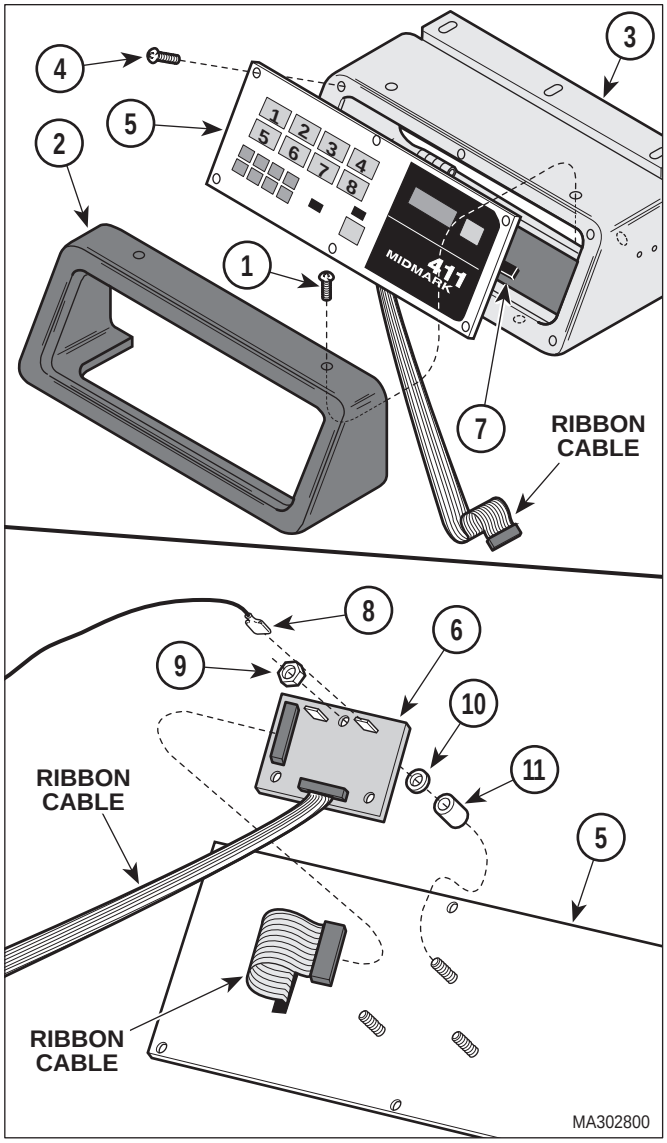

Figure 4-7. Program Panel or Program Panel Interface Board Removal / Installation

(4) Disconnect ribbon cable of program panel interface board (6) from PC logic board (7).

(5) Disconnect two wires (8) from program panel interface board (6) and then remove program panel (5) from table.

(6) Disconnect ribbon cable of program panel (5) from program panel interface board (6).

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NOTE
Newer program panel interface boards do not have spacers (11) and lockwashers (10).

(7) Remove three locknuts (9) and program panel interface board (6) from program panel (5) **or** remove three nuts (9), lockwashers (10), program panel interface board (6), and spacers (11) from program panel (5).

B. Installation

NOTE
If replacing an old style program panel interface board (does not have standoffs) with a new style program panel interface board (has standoffs), discard spacers; they are not necessary.

(1) Install program panel interface board (6) on program panel (5) and secure with three locknuts (9) **or** three spacers (11), lockwashers (10) and nuts (9).

(2) Connect ribbon cable of program panel (5) to program panel interface board (6).

(3) Connect two wires (8) to program panel interface board (6).

(4) Connect ribbon cable of program panel interface board (6) to PC logic board (7).

(5) Install program panel (5) on console weldment (3) and secure with six screws (4).

(6) Install bezel (2) on console weldment (3) and secure with four screws (1).

(7) Plug table power cord into wall outlet.

4.8 Hand Control Panel or Hand Control Board Removal / Installation

A. Removal

(1) Disconnect coil cord (1, Figure 4-8) from hand control.

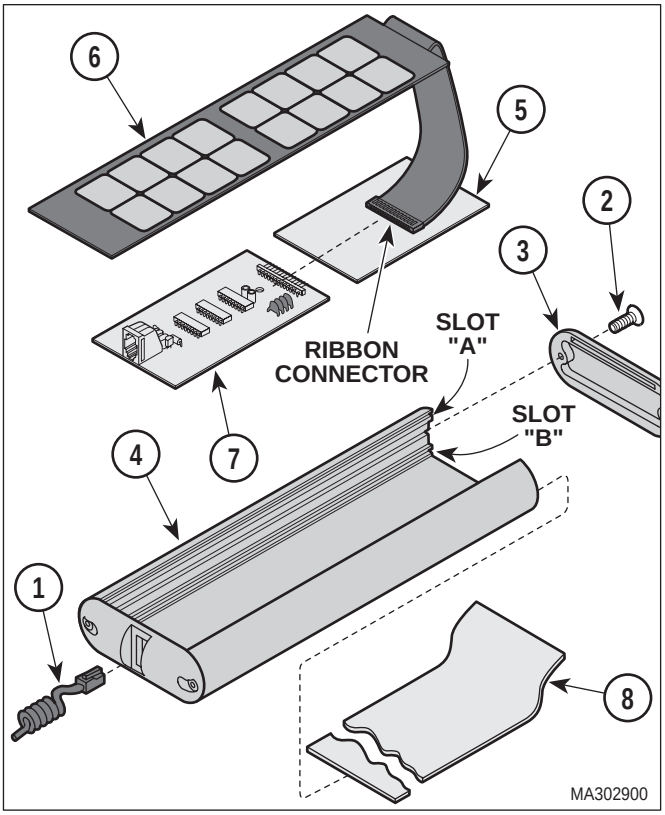

Figure 4-8. Hand Control Panel or Hand Control Board Removal / Installation

(2) Remove two screws (2) and top end cap (3) from hand control tube (4).

(3) Remove spacer plate (5) from hand control tube (4).

(4) Remove hand control panel (6) and hand control board (7) as an assembly from hand control tube (4).

(5) Disconnect ribbon connector of hand control panel (6) from hand control board (7).

B. Installation

(1) Connect ribbon connector of hand control panel (6) to hand control board (7).

(2) Make sure fishpaper insulator (8) is on the bottom of hand control tube (4).

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(3) Simultaneously, slide hand control panel (6) into slot A and hand control board (7) into slot B of hand control tube (4).

(4) Install spacer plate (5) into slot B of hand control tube (4).

(5) Install top end cap (3) on hand control tube (4) and secure with two screws (2).

(6) Connect coil cord (1) to hand control.

4.9 Pan Safety Limit Switch Removal / Installation

A. Removal

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(1) Unplug table power cord from wall outlet.

(2) Remove upholstered seat (1, Figure 4-9) from seat board assembly (2).

NOTE
Removal of latest version of stirrup housing is shown. Removal of early versions of stirrup housing is similar.

(3) Remove one screw (3), two screws (4), lockwashers (5), and stirrup housing (6) from each side of seat weldment (7).

(4) Remove four screws (8), lockwashers (9), and seat board assembly (2) from seat weldment (7).

NOTE
If necessary, install a jumper wire across two wires (10) so FOOT DOWN function may be lowered.

(5) Run FOOT DOWN function all the way down.

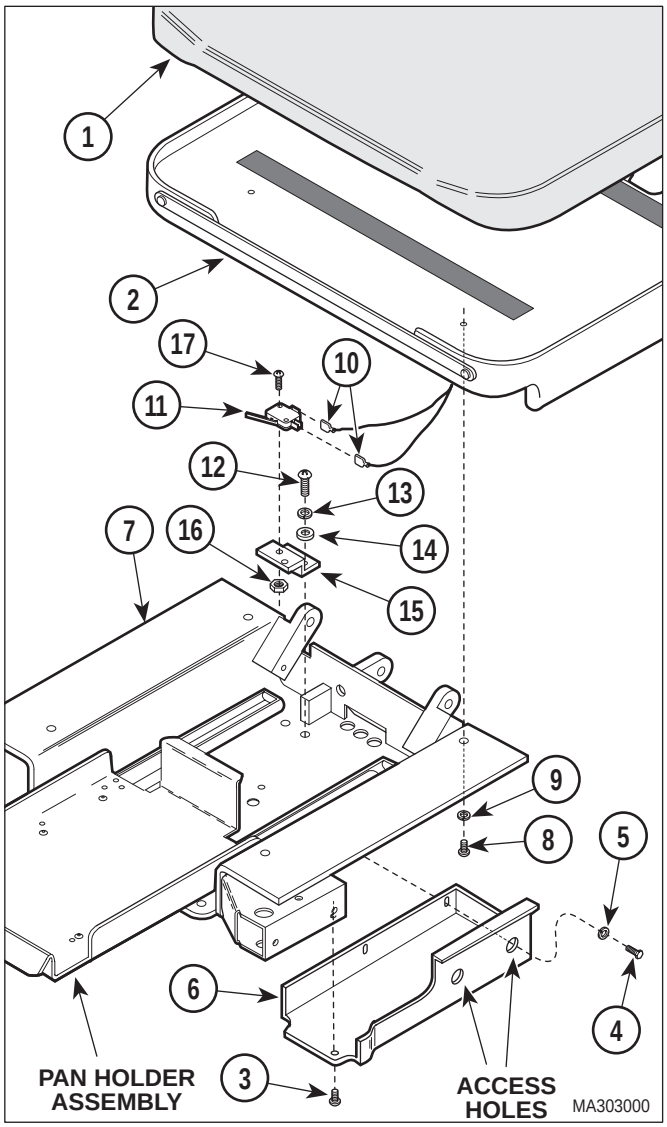

Figure 4-9. Pan Safety Limit Switch Removal / Installation / Adjustment

(6) Disconnect two wires (10) from pan safety limit switch (11).

(7) Remove two screws (12), lockwashers (13), washers (14) and switch bracket (15) from seat weldment (7).

(8) Remove two nuts (16), screws (17), and pan safety limit switch (11) from switch bracket (15).

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B. Installation

(1) Install pan safety limit switch (11) on switch bracket (15) and secure with two screws (17) and nuts (16).

(2) Install switch bracket (15) on seat weldment (7) and secure with two washers (14), lockwashers (13), and screws (12). Do not tighten screws (12) fully.

(3) Push pan holder assembly inward until it locks into its fully stowed position.

(4) Connect one wire (10) to N.O. terminal of pan safety limit switch (11) and other wire (10) to COM. terminal of pan safety limit switch.

EQUIPMENT ALERT
Adjust pan safety limit switch so only trip arm of limit switch makes contact with pan holder assembly when it is closed; otherwise damage to limit switch could occur from pan holder assembly "slamming" into the limit switch.

(5) Slide switch bracket (15) toward rear panel of pan holder assembly until trip arm of pan safety limit switch (11) is firmly tripped by pan holder assembly. Tighten two screws (12).

(6) Install seat board assembly (2) on seat weldment (7) and secure with four lockwashers (9) and screws (8).

NOTE
Installation of latest version of stirrup housing is shown. Installation of early versions of stirrup housing is similar.

(7) Install one stirrup housing (6) on each side of seat weldment (7) and secure with two lockwashers (5), screws (4), and screw (3).

(8) Install upholstered seat (1) on seat board assembly (2).

(9) Plug table power cord into wall outlet.

4.10 Typical Capacitor Removal / Installation

A. Removal

(1) If possible, raise TABLE UP function all the way up.

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug table power cord from wall outlet.

(3) Remove shrouds as necessary (Refer to para 4.2 or 4.3).

(4) Remove two screws (1, Figure 4-10) and back lower shroud (2) from R.H. and L.H. support channels (3).

(5) If necessary, cut any cable ties securing wires to capacitor being removed.

(6) Using a screwdriver, pry tab of capacitor mounting bracket (4) upward and remove capacitor (5) from capacitor mounting bracket.

(7) Remove capacitor cap (6) from capacitor (5).

WARNING
A capacitor contains stored electricity. Never touch terminals of a capacitor, even if power has been shut off or disconnected. Always discharge capacitor before touching capacitor terminals or wires. Failure to comply with these instruction could result in serious personal injury or death.

(8) Discharge capacitor (5).

(9) Disconnect two wires (7) from terminals of capacitor (5).

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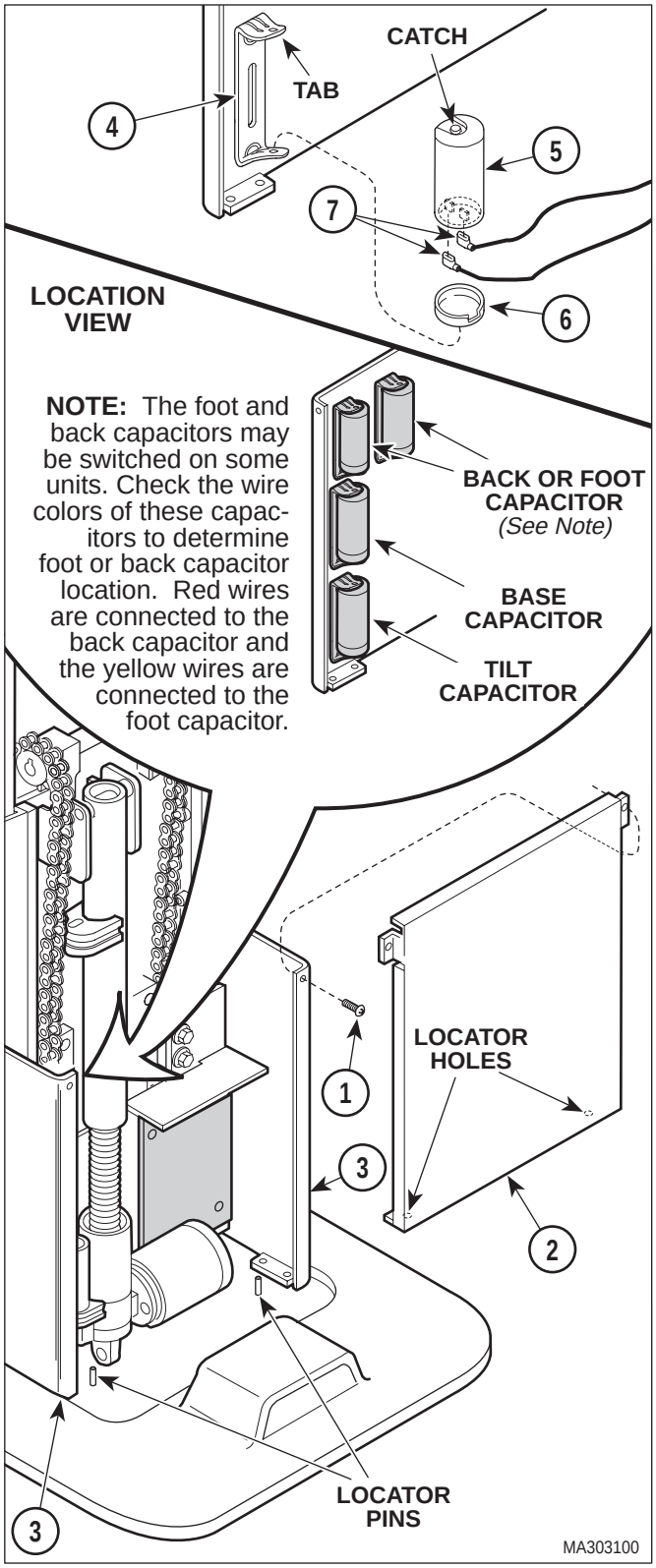

Figure 4-10. Typical Capacitor Removal / Installation

B. Installation

(1) Connect two wires (7) to terminals of capacitor (5).

(2) Install capacitor cap (6) on capacitor (5).

(3) Position bottom of capacitor (5) on capacitor mounting bracket (4) and then push the top of the capacitor in. Using a screwdriver, force tab of capacitor mounting bracket (4) down over catch.

(4) If removed, install cable ties to secure wires to capacitor (5).

(5) Install back lower shroud (2) on R.H. and L.H. support channels (3) and secure with two screws (1), making sure locator pins are inserted thru locator holes of back lower shroud.

(6) If removed, install shrouds (Refer to para 4.2 or 4.3).

(7) Plug table power cord into outlet.

4.11 Back Actuator Receiver and Transmitter Removal / Installation

NOTE
The back receiver and back transmitter are a matched set and must be replaced as a set.

A. Removal

(1) If possible, raise BACK UP function all the way up.

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug table power cord from wall outlet.

(3) Remove four screws (1, Figure 4-11), lockwashers (2), and backrest assembly (3) from back weldment (4).

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(4) Use pencil or tape to mark positions of back receiver (5) and back transmitter (6) on back actuator (7).

(5) Disconnect cable (8) from back transmitter (6).

(6) Cut two cable ties securing back transmitter (6) to shaft of back actuator (7) and remove back transmitter.

(7) Disconnect cable (9) from back receiver (5).

(8) Cut three cable ties securing back receiver (5) to back actuator (7) and remove back receiver.

(9) Remove sound tube (10) from back receiver (5).

B. Installation

NOTE
If you become uncertain as to which part is the receiver and which part is the transmitter, remove the receiver or transmitter from its black plastic mounting bracket and check its identification number (located on side of receiver or transmitter). An EFR**R**TB40K2 number indicates the part is a receiver while an EFR**O**TB40K2 number indicates the part is a transmitter.

(1) Install sound tube (10) on back receiver (5).

(2) Align back receiver (5) with mark (made during removal) on back actuator (7) and secure in this position with three cable ties.

(3) Connect cable (9) to back receiver (5).

(4) Align back transmitter (6) with mark (made during removal) on back actuator (7) and secure in this position with two cable ties.

(5) Connect cable (8) to back transmitter (6).

(6) Carefully run BACK UP function all the way up and then run BACK DOWN function all the way down, while watching to make sure the back receiver (5) or back transmitter (6) does not come into contact with anything.

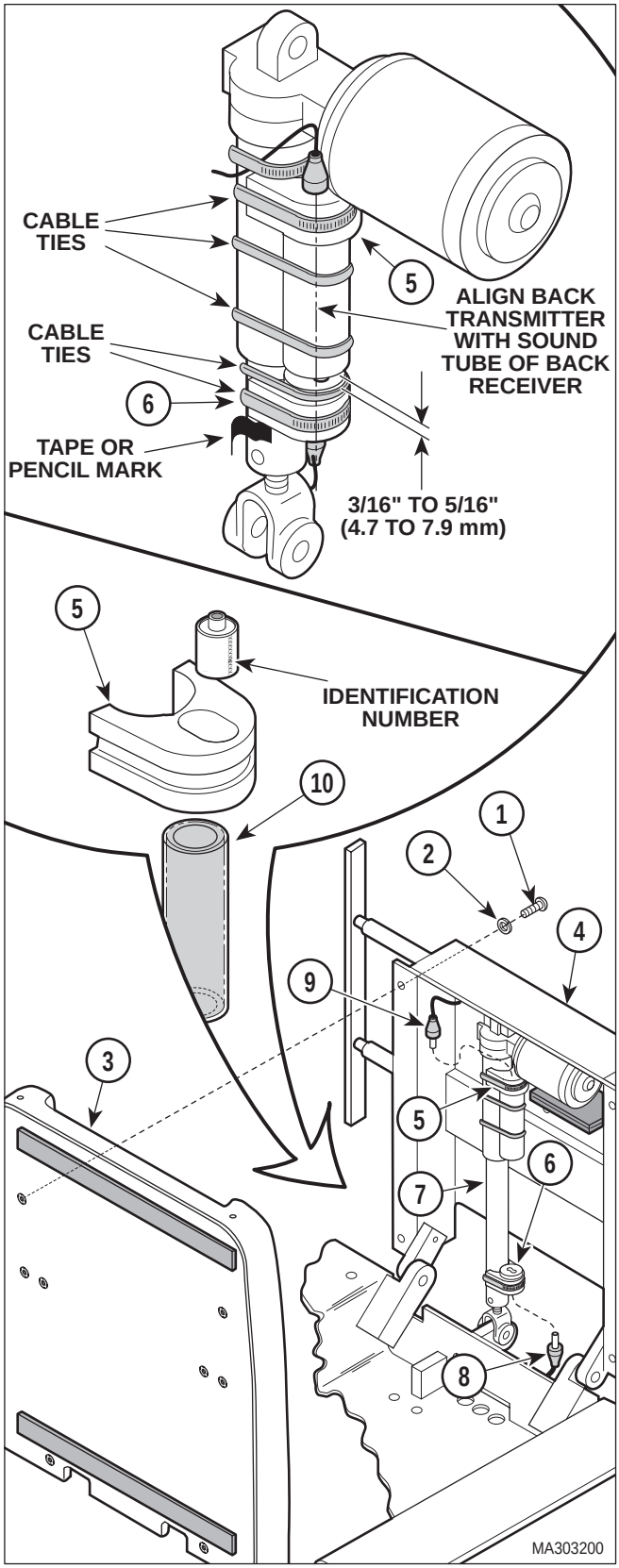

Figure 4-11. Back Actuator Receiver and Transmitter Removal / Installation

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(7) If it is determined that contact will occur, adjust both the back receiver (5) and / or back transmitter (6) as determined necessary to correct situation.

(8) Lower BACK DOWN function all the way down.

EQUIPMENT ALERT
The alignment of the back receiver and back transmitter is critical to the programming function. Failure to do so could result in programming operation malfunction.

(9) Slide back transmitter (6) up or down shaft of back actuator (7) until back transmitter is 3/16 to 5/16 in. (4.7 to 7.9 mm) from sound tube (10). Then rotate back transmitter (6) until it is directly aligned with sound tube (10) of back receiver (5).

NOTE
Because the back receiver and back transmitter may not be returned exactly to the same position, have the operator check the integrity of the programmed positions.

(10) Install backrest assembly (3) on back weldment (4) and secure with four lockwashers (2) and screws (1).

4.12 Back Actuator Removal / Installation

A. Removal

(1) If possible, lower BACK DOWN function all the way down.

(2) Remove back actuator transmitter and receiver (Refer to para 4.11).

(3) Cut cable tie securing three wires (1, Figure 4-12) and receiver cable (2) to shaft of back actuator (3).

(4) Tag and disconnect three wires (1) from actuator wires (4).

(5) Cut cable tie securing transmitter cable (5) to shaft of back actuator (3).

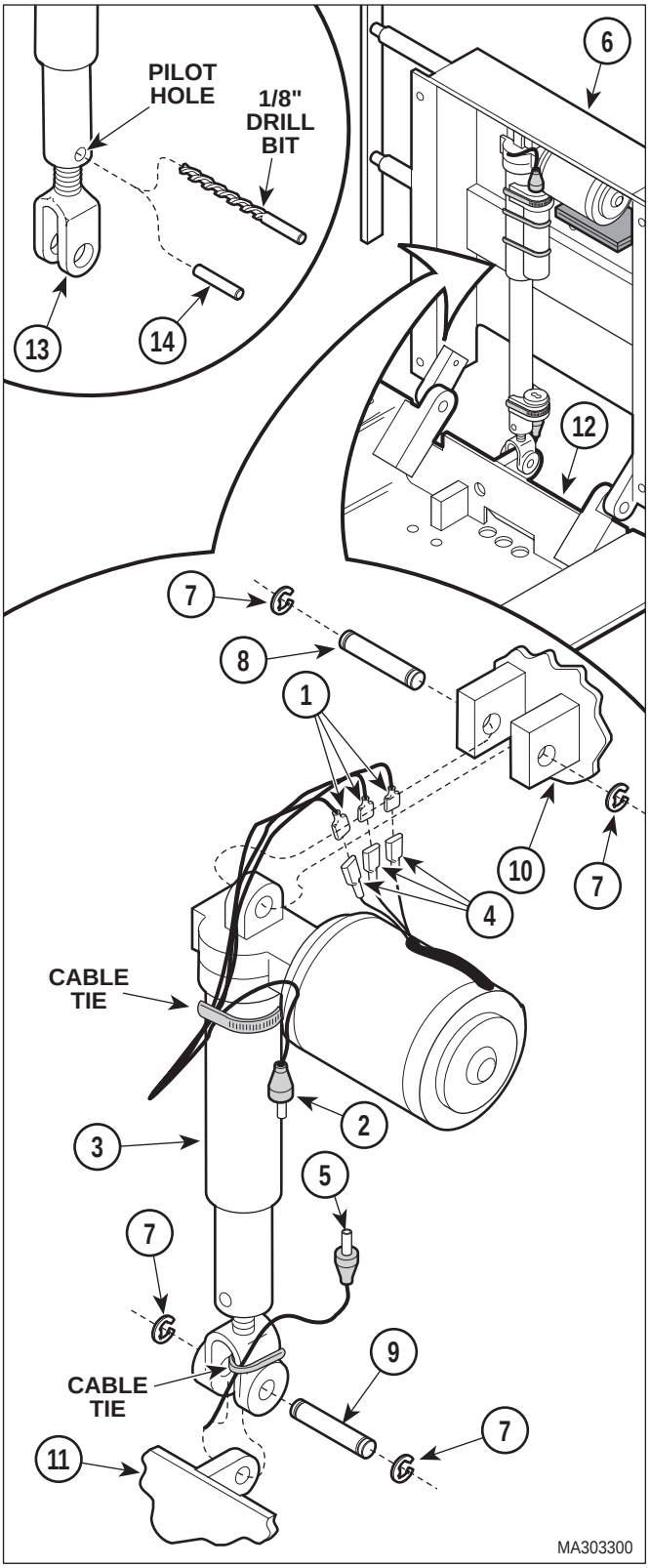

Figure 4-12. Back Actuator Removal / Installation

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(6) While supporting back weldment (6), remove four e-rings (7), two clevis pins (8 and 9), and back actuator (3) from brackets (10 and 11).

B. Installation

(1) If installing new back actuator (3), transfer marks for back receiver and back transmitter from old back actuator to new back actuator.

(2) Install back actuator (3) on brackets (10 and 11) and secure with two clevis pins (8 and 9) and four e-rings (7).

(3) Connect three actuator wires (4) to wires (1).

(4) Secure three wires (1) and receiver cable (2) to shaft of back actuator (3) with a cable tie.

(5) Lower BACK DOWN function all the way down (until back actuator can be heard free wheeling).

(6) Observe. Back weldment (6) should be parallel with seat section (12). If back weldment *is* parallel with seat section, go to step 11. If back weldment *is not* parallel with seat section, go to step 7.

(7) While supporting back weldment (6), remove clevis pin (9) securing clevis (13) to bracket (11).

(8) Screw clevis (13) inward or outward as determined necessary in step 6.

(9) Connect clevis (13) to bracket (11) with clevis pin (9).

(10) Repeat steps 5 thru 10 until back weldment (6) is parallel with seat section (12).

(11) Install two e-rings (7) on clevis pin (9).

(12) Using pilot hole as a guide, drill hole thru clevis (13) with a 1/8 in. drill bit.

EQUIPMENT ALERT
Carefully drive in roll pin. Using excessive force could bend rod, resulting in noisy operation.

(13) Secure clevis (13) in position by installing roll pin (14) in pilot hole.

(14) Secure cable (5) to clevis (13) with a cable tie.

(15) Install back actuator transmitter and receiver (Refer to para 4.11).

4.13 Foot Actuator Receiver and Transmitter Removal / Installation

NOTE
The foot receiver and foot transmitter are a matched set and must be replaced as a set.

A. Removal

(1) If possible, raise FOOT UP function all the way up.

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug table power cord from wall outlet.

(3) Remove four screws (1, Figure 4-13), and plastic foot cover (2) from foot extension (3).

(4) Use pencil or tape to mark positions of foot receiver (4) and foot transmitter (5) on shaft of foot actuator (6).

(5) Disconnect cable (7) from foot transmitter (5).

(6) Cut two cable ties securing foot transmitter (5) to shaft of foot actuator (6) and remove foot transmitter.

(7) Disconnect cable (8) from foot receiver (4).

(8) Cut three cable ties securing foot receiver (4) to foot actuator (6) and remove foot receiver.

(9) Remove sound tube (9) from foot receiver (4).

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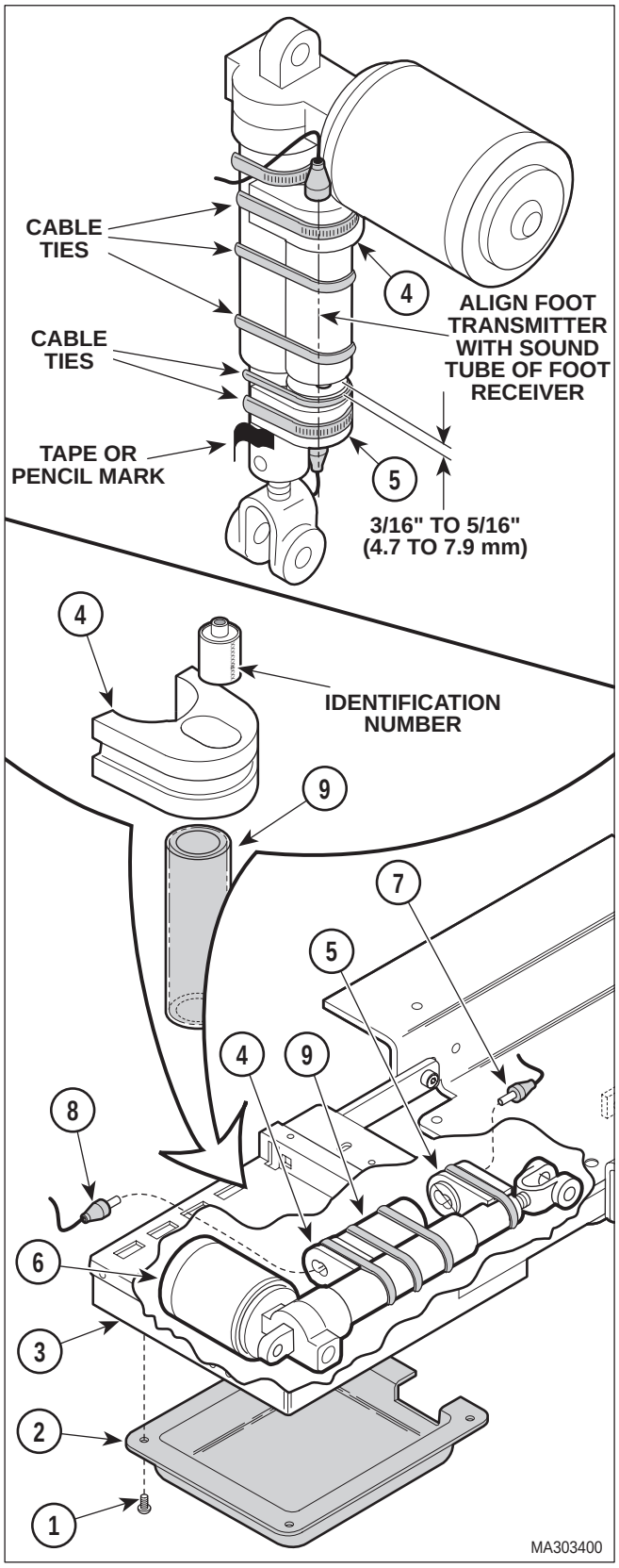

Figure 4-13. Foot Actuator Receiver and Transmitter Removal / Installation

B. Installation

NOTE

If you become uncertain as to which part is the receiver and which part is the transmitter, remove the receiver or transmitter from its black plastic mounting bracket and check its identification number (located on side of receiver or transmitter). An EFR**R**TB40K2 number indicates the part is a receiver while an EFR**O**TB40K2 number indicates the part is a transmitter.

(1) Install sound tube (9) on foot receiver (4).

(2) Align foot receiver (4) with mark (made during removal) on foot actuator (6) and secure in this position with three cable ties.

(3) Connect cable (8) to foot receiver (4).

(4) Align foot transmitter (5) with mark (made during removal) on foot actuator (6) and secure in this position with two cable ties.

(5) Connect cable (7) to foot transmitter (5).

(6) Carefully run FOOT UP function all the way up and then run FOOT DOWN function all the way down, while watching to make sure the foot receiver (4) or foot transmitter (5) does not come into contact with anything.

(7) If it is determined that contact will occur, adjust both the foot receiver (4) and / or foot transmitter (5) as determined necessary to correct situation.

(8) Lower FOOT DOWN function all the way down.

EQUIPMENT ALERT

The alignment of the foot receiver and foot transmitter is critical to the programming function. Failure to do so could result in programming operation malfunction.

(9) Slide foot transmitter (5) up or down shaft of foot actuator (6) until foot transmitter is 3/16 to 5/16 in. (4.7 to 7.9 mm) from sound tube (9). Then rotate foot transmitter (5) until it is directly aligned with sound tube (9) of back receiver (4).

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NOTE
Because the foot receiver and foot transmitter may not be returned exactly to the same position, have the operator check the integrity of the programmed positions.

(10) Install plastic foot cover (2) on foot extension (3) and secure with four screws (1).

4.14 Foot Actuator Removal / Installation

A. Removal

(1) If possible, raise FOOT UP function all the way up.

(2) Remove foot actuator transmitter and receiver (Refer to para 4.13).

(3) Cut cable ties securing three actuator wires (1, Figure 4-14) and receiver cable (2) to shaft of foot actuator (3).

(4) Tag and disconnect three actuator wires (1) from three wires (4).

(5) Cut cable tie securing transmitter cable (5) to shaft of foot actuator (3).

(6) While supporting foot extension (6), remove two e-rings (7), clevis pin (8) securing shaft of foot actuator (3) to bracket (9).

(7) While supporting foot extension (6), remove three screws (10) and foot actuator (3) from foot extension. Lower foot extension.

(8) Remove two e-rings (11), clevis pin (12), and actuator hitch (13) from foot actuator (3).

B. Installation

(1) If installing new foot actuator (3), transfer marks for foot receiver and foot transmitter from old foot actuator to new foot actuator.

(2) Install actuator hitch (13) on foot actuator (3) and secure with clevis pin (12) and two e-rings (11).

(3) Install foot actuator (3) on foot extension (6) and secure with three screws (10).

(4) Connect clevis (14) to bracket (9) and secure with clevis pin (8).

(5) Connect three actuator wires (1) to three wires (4).

(6) Secure three actuator wires (1) to shaft of foot actuator (3) with cable ties.

(7) Lower FOOT DOWN function all the way down (until foot actuator can be heard free wheeling).

(8) Observe. Foot extension (6) should be parallel with seat section (15). If foot extension *is* parallel with seat section, go to step 13. If foot extension *is not* parallel with seat section, go to step 9.

(9) While supporting foot extension (6), remove clevis pin (8) securing clevis (14) to bracket (9).

(10) Screw clevis (14) inward or outward as determined necessary in step 7.

(11) Connect clevis (14) to bracket (9) with clevis pin (8).

(12) Repeat steps 7 thru 11 until back foot extension (6) is parallel with seat section (15).

(13) Install two e-rings (7) on clevis pin (8).

(14) Using pilot hole as a guide, drill hole thru clevis (14) with a 1/8 in. drill bit.

EQUIPMENT ALERT
Carefully drive in roll pin. Using excessive force could bend rod, resulting in noisy operation.

(15) Secure clevis (14) in position by installing roll pin (16) in pilot hole.

(16) Secure cable (5) to clevis (14) with a cable tie.

(17) Install foot actuator transmitter and receiver (Refer to para 4.13).

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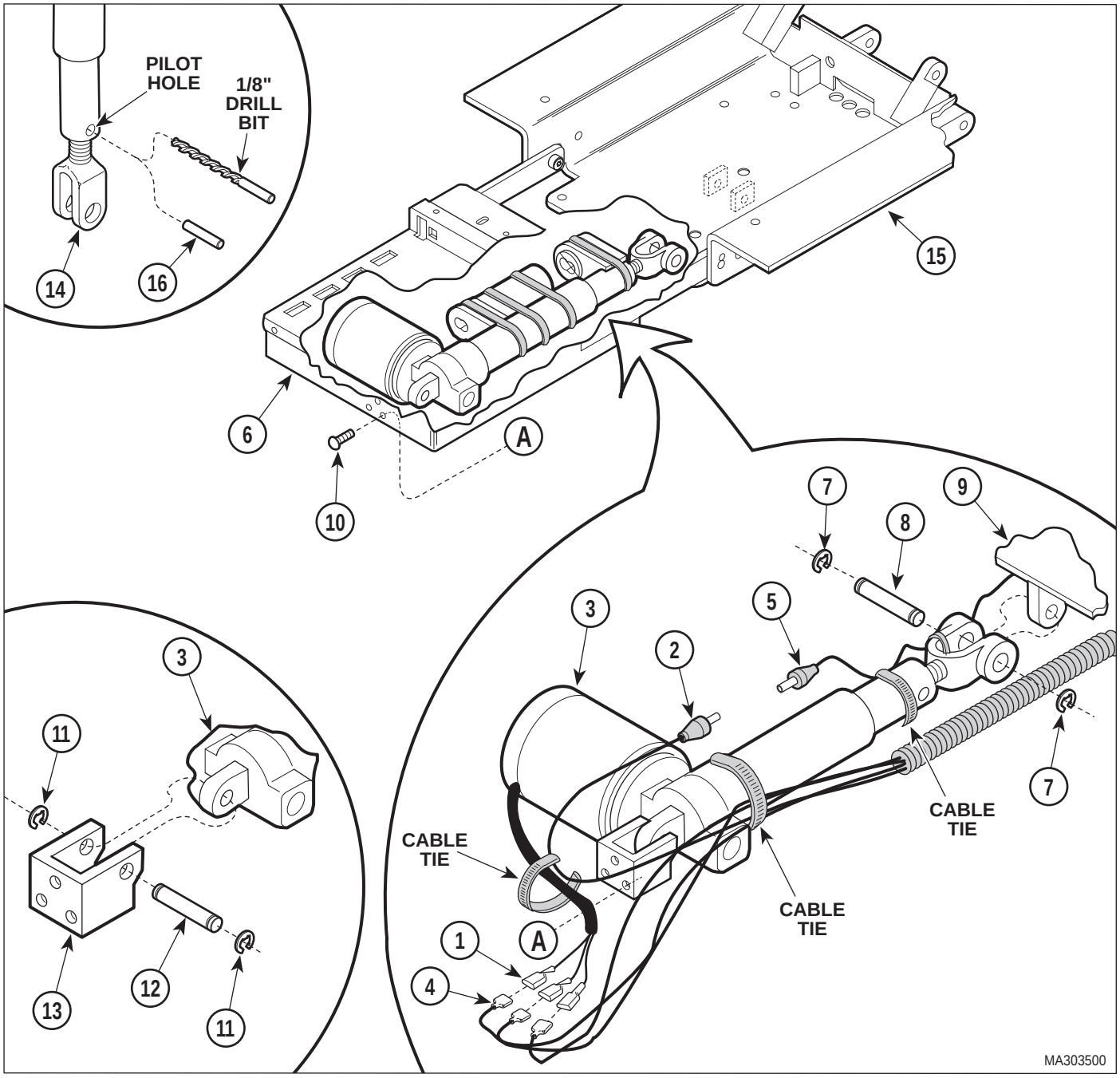

Figure 4-14. Foot Actuator Removal / Installation

4.15 Tilt Actuator Receiver and Transmitter Removal / Installation

NOTE
The tilt receiver and tilt transmitter are a matched set and must be replaced as a set.

A. Removal

(1) If possible, raise TABLE UP and FOOT UP functions all the way up.

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug table power cord from wall outlet.

(3) Remove shrouds as necessary (Refer to para 4.2 or 4.3).

(4) Use pencil or tape to mark positions of tilt receiver (1, Figure 4-15) and tilt transmitter (2) on shaft of tilt actuator (3).

(5) Disconnect cable (4) from tilt transmitter (2).

(6) Cut two cable ties securing tilt transmitter (2) to shaft of tilt actuator (3) and remove tilt transmitter.

(7) Disconnect cable (5) from tilt receiver (1).

(8) Cut three cable ties securing tilt receiver (1) to tilt actuator (3) and remove tilt receiver.

(9) Remove sound tube (6) from tilt receiver (1).

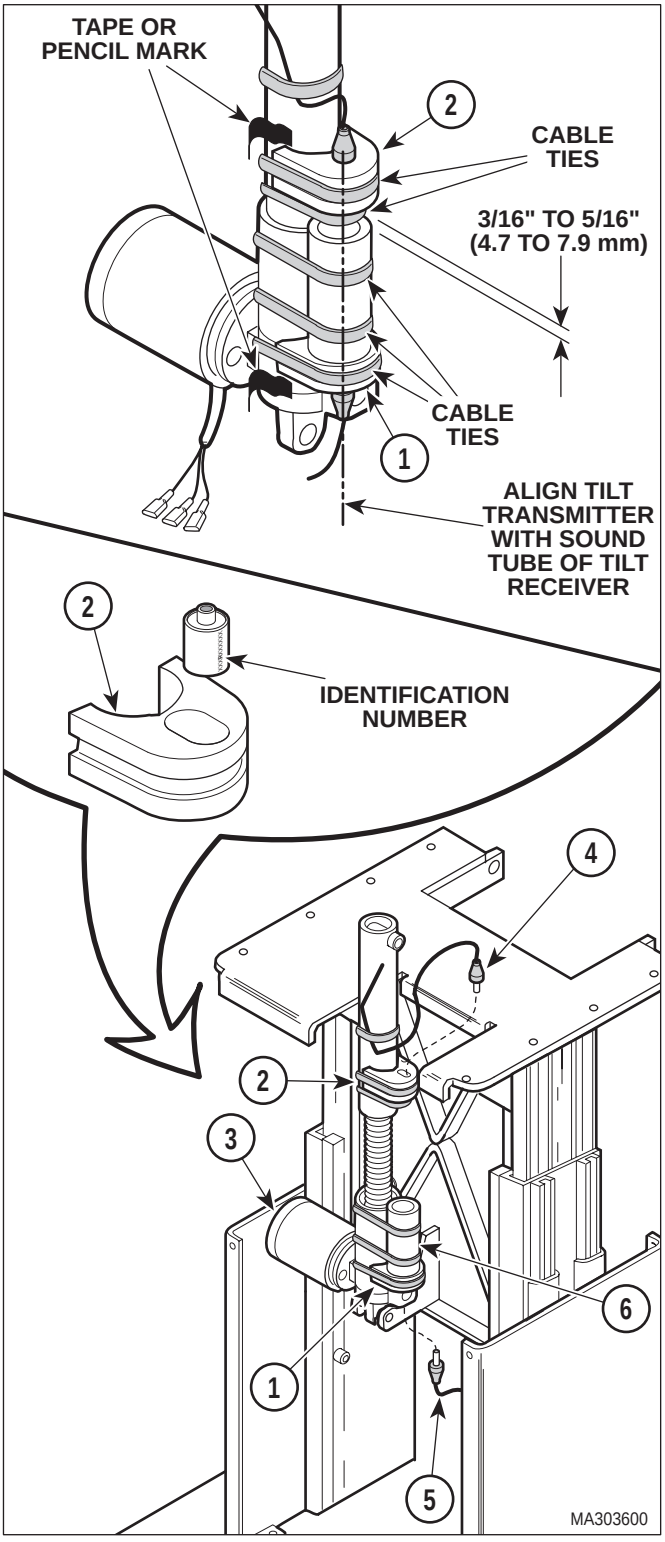

Figure 4-15. Tilt Actuator Receiver and Transmitter Removal / Installation

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B. Installation

NOTE
If you become uncertain as to which part is the receiver and which part is the transmitter, remove the receiver or transmitter from its black plastic mounting bracket and check its identification number (located on side of receiver or transmitter). An EFR**R**TB40K2 number indicates the part is a receiver while an EFR**O**TB40K2 number indicates the part is a transmitter.

(1) Install sound tube (6) on tilt receiver (1).

(2) Align tilt receiver (1) with mark (made during removal) on tilt actuator (3) and secure in this position with three cable ties.

(3) Connect cable (5) to tilt receiver (1).

(4) Align tilt transmitter (2) with mark (made during removal) on tilt actuator (3) and secure in this position with two cable ties.

(5) Connect cable (4) to tilt transmitter (2).

(6) Carefully run TILT UP function all the way up and then run TILT DOWN function all the way down, while watching to make sure the tilt receiver (1) or tilt transmitter (2) does not come into contact with anything.

(7) If it is determined that contact will occur, adjust both the tilt receiver (1) and / or tilt transmitter (2) as determined necessary to correct situation.

(8) Lower TILT DOWN function all the way down.

EQUIPMENT ALERT
The alignment of the tilt receiver and tilt transmitter is critical to the programming function. Failure to do so could result in programming operation malfunction.

(9) Slide tilt transmitter (2) up or down shaft of tilt actuator (3) until tilt transmitter is 3/16 to 5/16 in. (4.7 to 7.9 mm) from sound tube (6). Then rotate tilt transmitter (2) until it is directly aligned with sound tube (6) of tilt receiver (1).

NOTE
Because the tilt receiver and tilt transmitter may not be returned exactly to the same position, have the operator check the integrity of the programmed positions.

(10) Install shrouds as necessary (Refer to para 4.2 or 4.3).

(11) Plug table power cord into wall outlet.

4.16 Tilt Actuator Removal / Installation

A. Removal

(1) Remove tilt actuator transmitter and receiver (Refer to para 4.15).

(2) Cut cable ties securing three wires (1, Figure 4-16) to tilt actuator (2).

(3) Tag and disconnect three wires (1) from three actuator wires (3).

(4) Cut two cable ties securing transmitter cable (4) to shaft of tilt actuator (2).

(5) While supporting foot end of table top, remove two e-rings (5) and clevis pin (6) securing shaft of tilt actuator (2) to bracket (7).

(6) Lower tilt actuator (2) down out of way; then lower foot end of table top downward until it is resting on inner member weldment (8).

NOTE
Clevis pin can only be removed in one direction as shown in the illustration.

(7) Remove two e-rings (9), clevis pin (10), and tilt actuator (2) from bracket (11).

B. Installation

(1) If installing new tilt actuator (2), transfer marks for tilt receiver and tilt transmitter from old tilt actuator to new tilt actuator.

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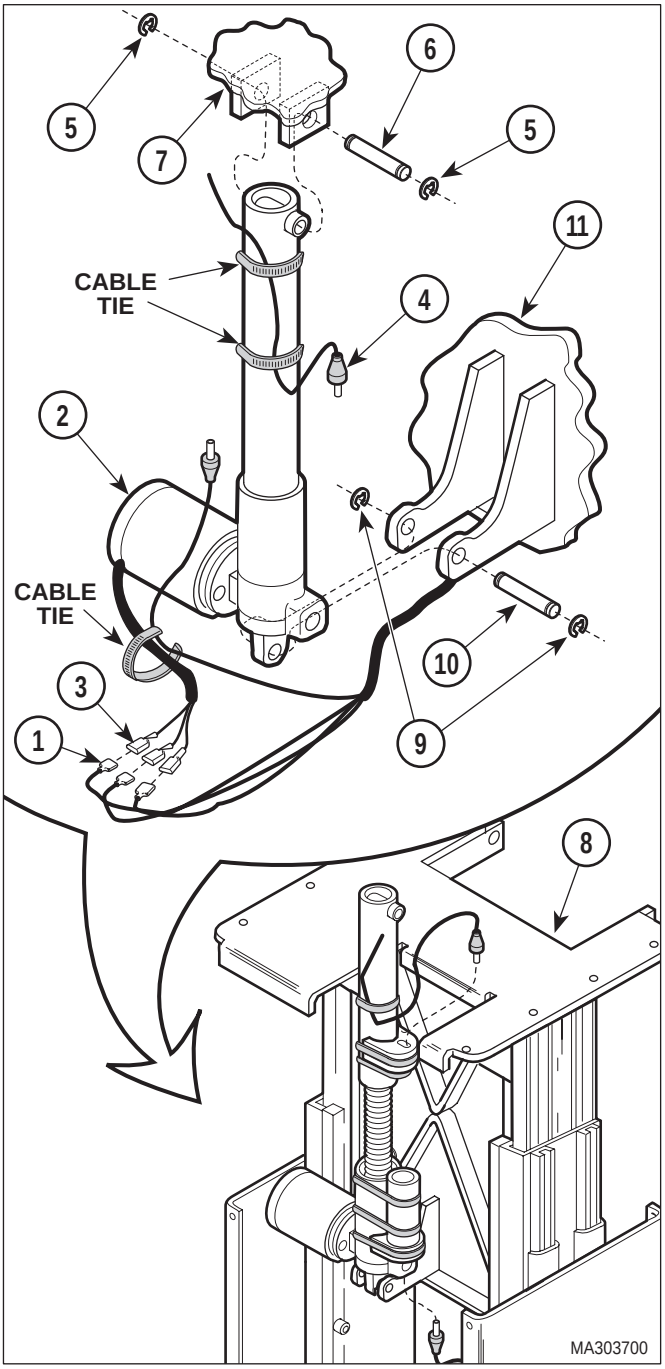

Figure 4-16 Tilt Actuator Removal / Installation

(2) Install tilt actuator (2) on bracket (11) and secure with clevis pin (10) and two e-rings (9).

(3) Connect three actuator wires (3) to three wires (1).

(4) While lifting up on foot end of table top, connect shaft of tilt actuator (2) to bracket (7) with clevis pin (6) and two e-rings (5).

(5) Secure three wires (1) to tilt actuator (2) with a cable tie.

(6) Secure cable (4) to shaft of tilt actuator (2) with cable ties.

(7) Install tilt actuator transmitter and receiver (Refer to para 4.15).

4.17 Base Actuator Receiver and Transmitter Removal / Installation

NOTE
The base receiver and base transmitter are a matched set and must be replaced as a set.

A. Removal

(1) If possible, raise TABLE UP and BACK UP functions all the way up.

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug table power cord from wall outlet.

(3) Remove shrouds as necessary (Refer to para 4.2 or 4.3).

(4) Remove two screws (1, Figure 4-17) and rear lower shroud (2) from R.H. and L.H. support channels (3).

(5) Use pencil or tape to mark positions of base receiver (4) and base transmitter (5) on shaft of base actuator (6).

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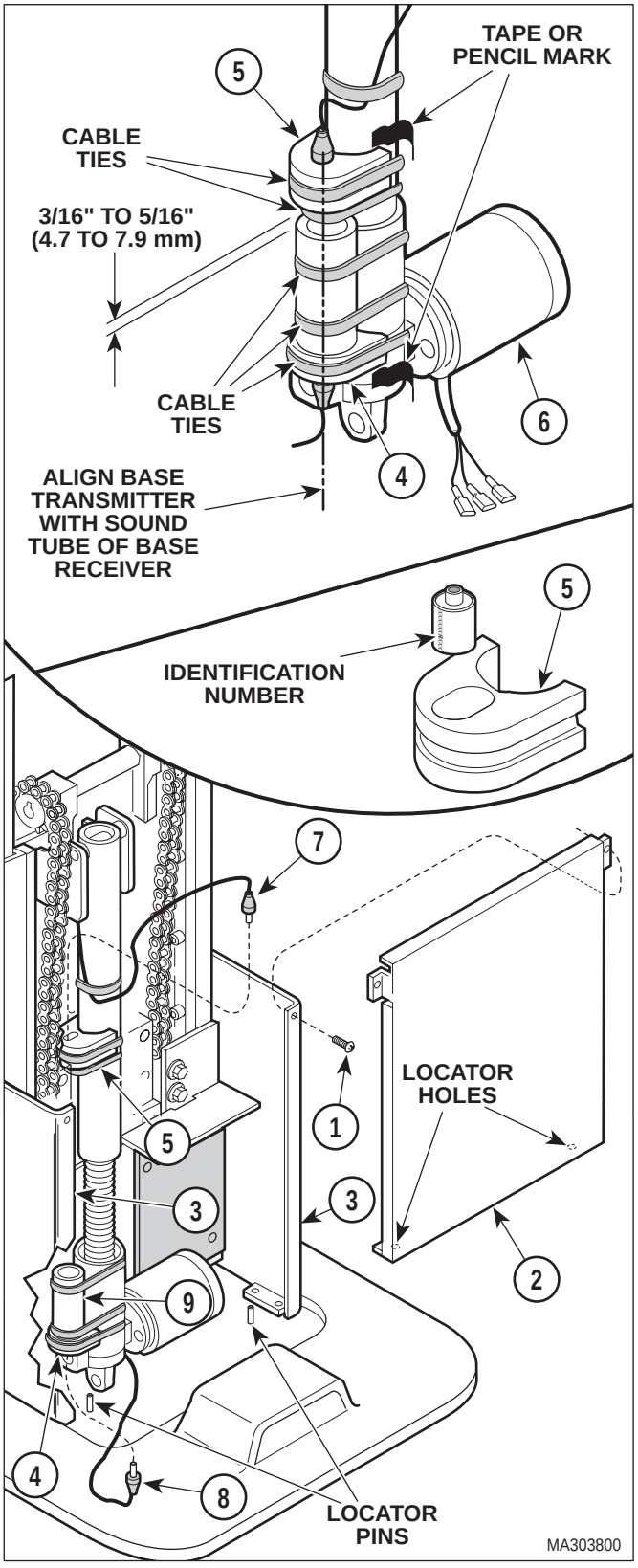

Figure 4-17. Base Actuator Receiver and Transmitter Removal / Installation

(6) Disconnect cable (7) from base transmitter (5).

(7) Cut two cable ties securing base transmitter (5) to shaft of base actuator (6) and remove base transmitter.

(8) Disconnect cable (8) from base receiver (4).

(9) Cut three cable ties securing base receiver (4) to base actuator (6) and remove base receiver.

(10) Remove sound tube (9) from base receiver (4).

B. Installation

NOTE
If you become uncertain as to which part is the receiver and which part is the transmitter, remove the receiver or transmitter from its black plastic mounting bracket and check its identification number (located on side of receiver or transmitter). An EFR**R**TB40K2 number indicates the part is a receiver while an EFR**O**TB40K2 number indicates the part is a transmitter.

(1) Install sound tube (9) on base receiver (4).

(2) Align base receiver (4) with mark (made during removal) on base actuator (6) and secure in this position with three cable ties.

(3) Connect cable (8) to base receiver (4).

(4) Align base transmitter (5) with mark (made during removal) on base actuator (6) and secure in this position with two cable ties.

(5) Connect cable (7) to base transmitter (5).

(6) Carefully run TABLE UP function all the way up and then run TABLE DOWN function all the way down, while watching to make sure the base receiver (4) or base transmitter (5) does not come into contact with anything.

(7) If it is determined that contact will occur, adjust both the base receiver (4) and / or base transmitter (5) as determined necessary to correct situation.

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(8) Lower BASE DOWN function all the way down.

EQUIPMENT ALERT
The alignment of the base receiver and base transmitter is critical to the programming function. Failure to do so could result in programming operation malfunction.

(9) Slide base transmitter (5) up or down shaft of base actuator (6) until base transmitter is 3/16 to 5/16 in. (4.7 to 7.9 mm) from sound tube (9). Then rotate base transmitter (5) until it is directly aligned with sound tube (9) of base receiver (4).

NOTE
Because the base receiver and base transmitter may not be returned exactly to the same position, have the operator check the integrity of the programmed positions.

(10) Install back lower shroud (2) on L.H. and R.H. support channels (3) and secure with two screws (1), making sure locator pins are inserted thru locator holes of back lower shroud.

(11) Install shrouds as necessary (Refer to para 4.2 or 4.3).

(12) Plug table power cord into wall outlet.

4.18 Base Actuator Removal / Installation

A. Removal

(1) Remove base actuator transmitter and receiver (Refer to para 4.17).

(2) If support bar is going to be used to support weight of table top, perform the following substeps. Otherwise, go to step 3. See Table 1-2 for special tool.

a. Run TABLE UP function all the way up.

b. With TABLE UP function in full up position, place support bar across top of R.H. and L.H. supports (1, Figure 4-18). Slide support bar under tilt bracket (2).

EQUIPMENT ALERT
Slowly and carefully lower base actuator until table top is resting on supports. Do not run base actuator until it is in a bind. Damage to base actuator could result.

c. Lower TABLE DOWN function until weight of table top (3) is resting on support bar.

(3) If support bar is not available, support table top with supports as described in the following substeps:

a. Run TABLE UP function to 3/4 full up position.

b. Run TILT DOWN function all the way down, FOOT UP function all the way up and BACK DOWN function all the way down, making table top (3) into a flat, horizontal position.

c. Place supports under foot section and back section of table top (3).

EQUIPMENT ALERT
Slowly and carefully lower base actuator until table top is resting on supports. Do not run base actuator until it is in a bind. Damage to base actuator could result.

d. Lower TABLE DOWN function until weight of table top (3) is resting on supports **or** raise supports up against table top.

(4) Cut cable tie securing wires to base actuator (4).

(5) Tag and disconnect three wires (5) from three actuator wires (6).

(6) Disconnect wire harness (7) from base down limit switch (8).

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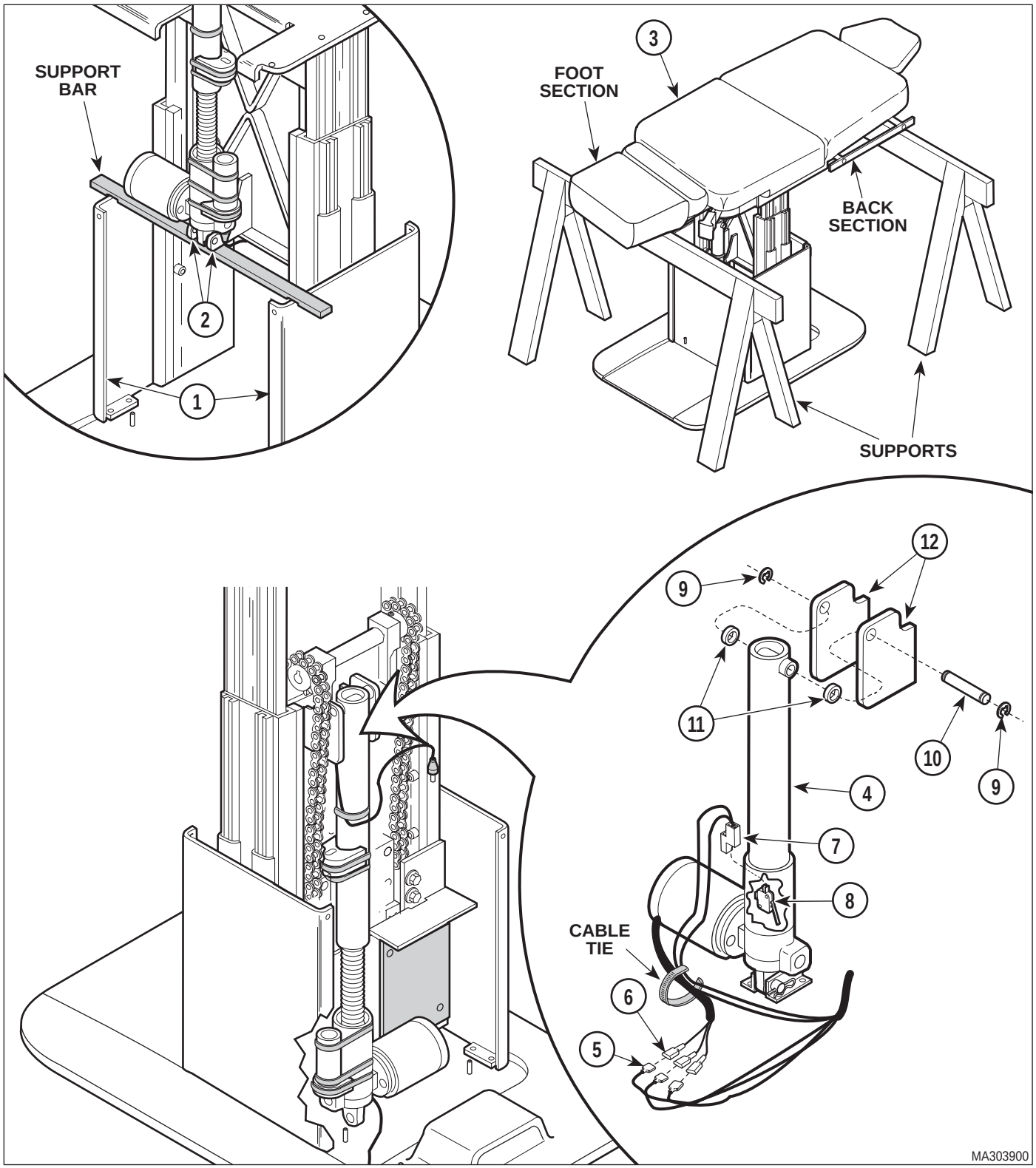

Figure 4-18 Table Top Support

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DANGER

Make sure weight of table top is securely supported, per step 2 or 3, and table top will not fall when clevis pin (10) is removed. Failure to do so will result in serious injury or death to personnel.

NOTE

Depending on strength of gas spring(s), the table top may raise when clevis pin is removed. This is an indicator that the gas spring(s) are functioning well.

(7) Remove two e-rings (9), clevis pin (10), and two spacers (11) securing shaft of base actuator (4) to bracket (12).

(8) Remove two screws (1, Figure 4-19) and front lower shroud (2) from R.H. and L.H. supports (3).

(9) Remove pin clip (4), clevis pin (5), and base actuator (6) from bracket (7).

(10) Remove two screws (8), lockwashers (9), and switch bracket assembly (10) from base actuator (6).

B. Installation

(1) If installing new base actuator (6, Figure 4-19), transfer marks for base receiver and base transmitter from old base actuator to new base actuator.

(2) Install switch bracket assembly (10) on base actuator (6) and secure with two lockwashers (9), and screws (8).

(3) Install base actuator (6) on bracket (7) and secure with clevis pin (5) and pin clip (4).

(4) Install front lower shroud (2) on L.H. and R.H. support channels (3) and secure with two screws (1), making sure locator pins are inserted thru locator holes of front lower shroud.

(5) Connect three actuator wires (6, Figure 4-18) to three wires (5).

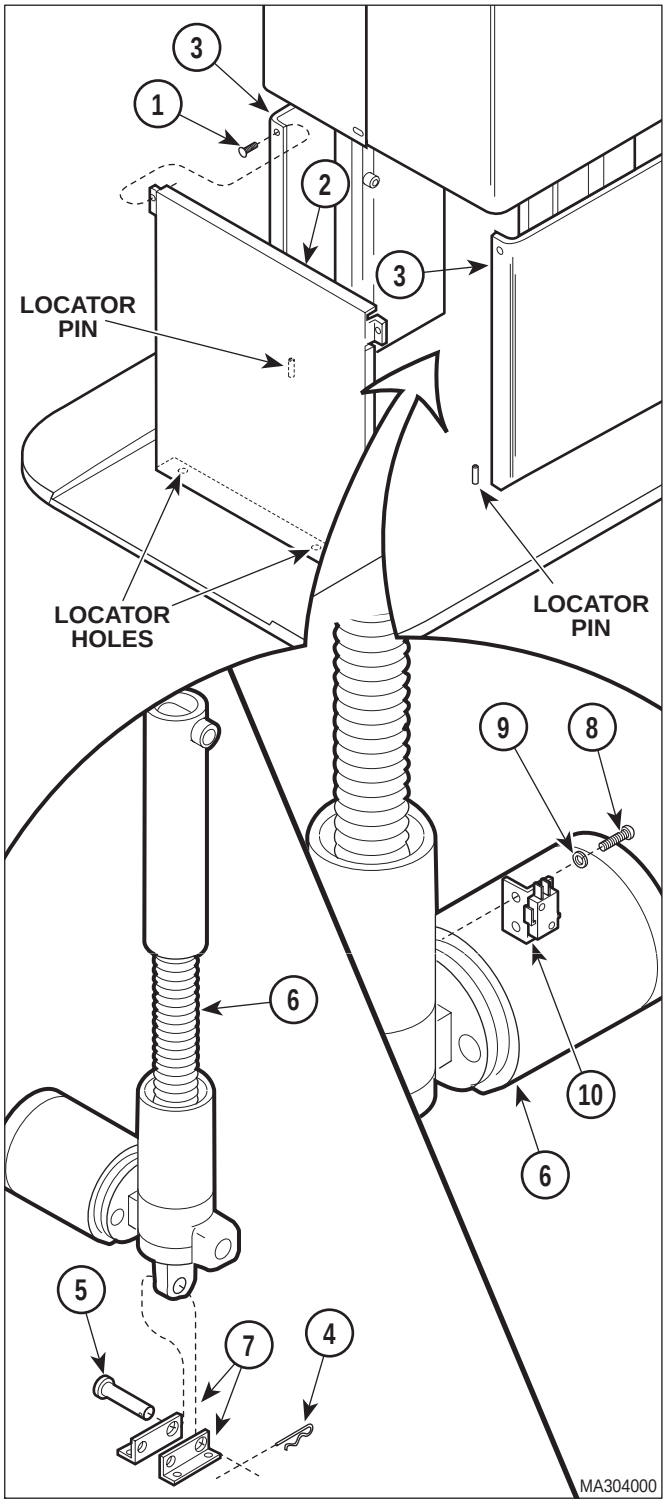

Figure 4-19. Base Actuator Removal / Installation

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(6) Connect wire harness (7) to base down limit switch (8).

NOTE
Depending on strength of gas spring(s), an assistant may be required to help lower the table top slightly to allow alignment of base actuator shaft with bracket.

(7) Raise or lower TABLE UP or TABLE DOWN function as necessary to align shaft of base actuator (4) with bracket (12).

(8) Secure shaft of base actuator (4) to bracket (12) with two spacers (11), clevis pin (10), and two e-rings (9).

(9) Raise TABLE UP function all the way up.

(10) Remove support bar from under tilt bracket (2) **or** remove supports from under foot section and back section of table top (3).

(11) Secure wires to base actuator (4) with a cable tie.

(12) Install base actuator transmitter and receiver (Refer to para 4.17).

4.19 Gas Spring(s) Removal / Installation

A. Removal

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

NOTE
The two special tools that are required to perform this procedure are included in the repair kit.

(1) Unplug table power cord from wall outlet.

(2) Remove shrouds as necessary (Refer to para 4.2 or 4.3).

(3) Remove two screws (1, Figure 4-20) and rear lower shroud (2) from R.H. and L.H. supports (3).

(4) Remove two screws (4) and front lower shroud (5) from R.H. and L.H. supports (3).

(5) If support bar is going to be used to support weight of table top, perform the following substeps. Otherwise, go to step 6. See Table 1-2 for special tools.

a. Run TABLE UP function all the way up.

b. With TABLE UP function in full up position, place support bar across top of R.H. and L.H. supports (3). Slide support bar under tilt bracket (6).

EQUIPMENT ALERT
Slowly and carefully lower base actuator until table top is resting on supports. Do not run base actuator until it is in a bind. Damage to base actuator could result.

c. Lower TABLE DOWN function until weight of table top (7) is resting on support bar.

(6) If support bar is not available, support table top with supports as described in the following substeps:

a. Run TABLE UP function to 3/4 full up position.

b. Run TILT DOWN function all the way down, FOOT UP function all the way up. and BACK DOWN function all the way down, making table top (7) into a flat, horizontal position.

c. Place supports under foot section and back section of table top (7).

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SECTION IV
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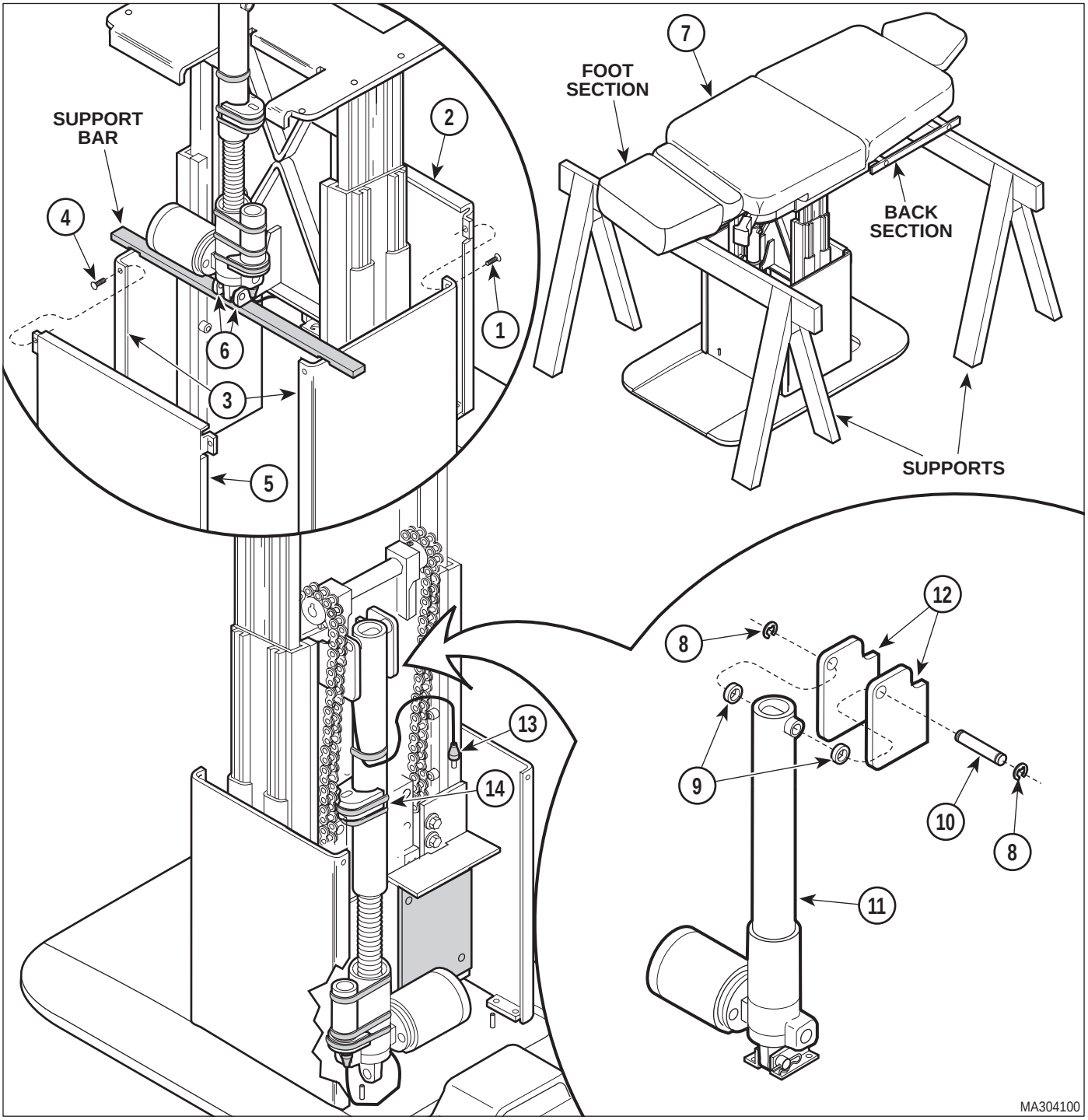

Figure 4-20 Table Top Support

EQUIPMENT ALERT
Slowly and carefully lower base actuator until table top is resting on supports. Do not run base actuator until it is in a bind. Damage to base actuator could result.

d. Lower TABLE DOWN function until weight of table top (7) is resting on supports **or** raise supports up against table top.

DANGER
Make sure weight of table top is securely supported, per step 5 or 6, and table top will not fall when clevis pin (10) is removed. Failure to do so will result in serious injury or death to personnel.

NOTE
Depending on strength of gas spring(s), the table top may raise when clevis pin is removed. This is an indicator that the gas spring(s) are functioning well.

(7) Remove two e-rings (8), spacers (9), and clevis pin (10) which secures shaft of base actuator (11) to bracket (12).

(8) Disconnect cable (13) from base transmitter (14).

EQUIPMENT ALERT
Slowly and carefully lower base actuator while holding shaft of base actuator stationary, making sure base transmitter (14) does not contact anything. Failure to do so could result in damage to base transmitter.

(9) While holding shaft of base actuator (11) stationary (so it cannot rotate), lower TABLE DOWN function until base actuator is fully retracted.

(10) Insert slot of pry bar in cutout of middle member assembly (1, Figure 4-21). See Table 1-2 for special tool.

(11) While pressing down on end of pry bar to relieve pressure from clevis pin (2), remove pin clip (3), clevis pin (2), and two spacers (4). Then, slowly raise up on pry bar until gas spring(s) (5) are fully extended and are no longer under tension. Remove pry bar.

(12) Remove pin clip (6), clevis pin (7), spacer(s) (8), and gas spring(s) (5) from bracket (9).

B. Installation

(1) Install rod end of gas spring(s) (5, Figure 4-21) on bracket (9) and secure with clevis pin (7), spacer(s) (8), and pin clip (6).

(2) Insert slot of pry bar in cutout of middle member assembly (1).

(3) While pressing down on end of pry bar to align gas spring(s) (5) with bracket (10), install two spacers (4), clevis pin (2), and pin clip (3) to secure gas spring(s) to bracket. Remove pry bar.

EQUIPMENT ALERT
Slowly and carefully raise base actuator while holding shaft of base actuator stationary, making sure base transmitter (14) does not contact anything. Failure to do so could result in damage to base transmitter.

(4) While holding shaft of base actuator (11, Figure 4-20) stationary (so it cannot rotate), raise TABLE UP function until shaft of base actuator is aligned with bracket (12).

NOTE
Depending on strength of gas spring(s), an assistant may be required to help lower the table top slightly to allow alignment of base actuator shaft with bracket.

(5) Secure shaft of base actuator (11) to bracket (12) with two spacers (9), clevis pin (10), and two e-rings (8).

(6) Raise TABLE UP function all the way up.

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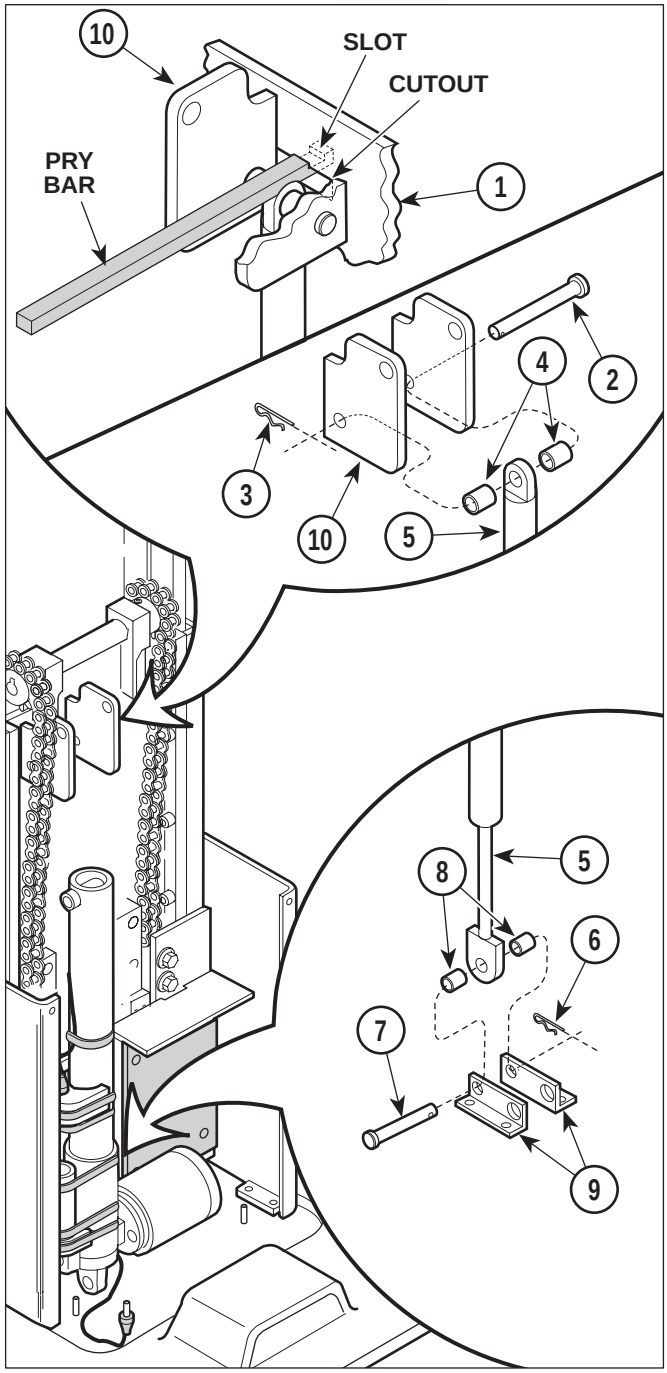

Figure 4-21. Gas Spring(s) Removal / Installation

(7) Remove support bar from under tilt bracket (6) **or** remove supports from under foot section and back section of table top (7).

(8) Connect cable (13) to base transmitter (14).

(9) Install front lower shroud (5) on L.H. and R.H. supports (3) and secure with two screws (4), making sure locator pins are inserted thru locator holes of front lower shroud.

(10) Install rear lower shroud (2) on L.H. and R.H. supports (3) and secure with two screws (1), making sure locator pins are inserted thru locator holes of front lower shroud.

(11) Install shrouds as necessary (Refer to para 4.2 or 4.3).

(12) Plug table power cord into wall outlet.

4.20 Base Down Limit Switch Removal / Installation

A. Removal

(1) Raise TABLE UP function all the way up.

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug table power cord from wall outlet.

(3) Remove two screws (1, Figure 4-22) and rear lower shroud (2) from R.H. and L.H. supports (3).

(4) Disconnect wire harness (4) from base down limit switch (5).

(5) Remove two nuts (6), lockwashers (7), screws (8), and base down limit switch (5) from switch bracket (9).

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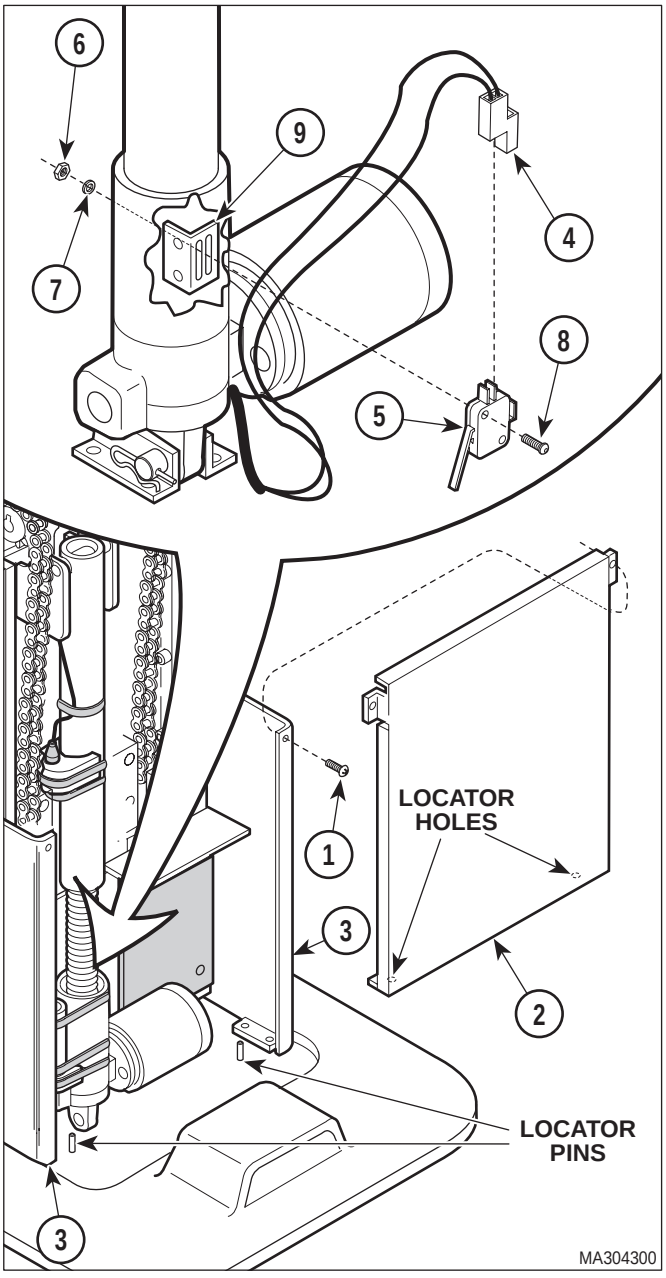

Figure 4-22. Base Down Limit Switch Removal / Installation

B. Installation

NOTE
Install base down limit switch as low as possible on switch bracket to start with.

(1) Install base down limit switch (5) on switch bracket (9) and secure with two screws (8), lockwashers (7), and nuts (6).

(2) Connect wire harness (4) to base down limit switch (5).

C. Adjustment

(1) Plug table power cord into wall outlet.

(2) Raise TABLE UP function up at least 6 in. (15.2 cm).

(3) Press AUTO RETURN "RETURN" button.

(4) Observe. The base actuator should begin to lower. When the base actuator is almost completely lowered, the base down limit switch should be tripped, stopping the base actuator.

(5) If the base actuator does not stop running after base actuator is completely lowered, loosen two nuts (6) and slide base down limit switch (5) upward approximately 1/16 in. (1.6 mm); then tighten two nuts.

(6) If the base down limit switch (5) trips too early so that the table top can be manually lowered more than 1/2 in. (12.7 mm) after the base down limit switch has been tripped, loosen two nuts (6) and slide base down limit switch (5) downward approximately 1/16 in. (1.6 mm); then tighten two nuts.

(7) Repeat steps 2 thru 6 until the base down limit switch (5) is adjusted properly.

(8) Install rear lower shroud (2) on L.H. and R.H. supports (3) and secure with two screws (1), making sure locator pins are inserted thru locator holes of front lower shroud.

4.21 Typical Actuator Motor / Actuator Brake Removal / Installation

A. Removal

(1) Remove malfunctioning actuator assembly:
Back actuator assembly (Refer to para 4.12).
Foot actuator assembly (Refer to para 4.14).
Tilt actuator assembly (Refer to para 4.16).
Base actuator assembly (Refer to para 4.18).

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(2) Remove two nuts (1, Figure 4-23) and actuator motor (2) from actuator mechanism (3).

(3) Remove two shoulder washers (4) from actuator mechanism (3).

(4) Remove spacer (5) and motor coupler (6) from shaft of actuator motor (2).

NOTE
A needle nose pliers should be used to extract the actuator brake from the actuator mechanism. Grasp the raised round plate of the actuator brake with the pliers and pull.

(5) Remove actuator brake (7) and rubber damper (8) from shaft of actuator mechanism (3).

B. Installation

NOTE
The rubber damper must be installed so its flat side faces the inside of the actuator mechanism. The actuator brake must be installed so its flattest side faces outward. The shaft of the actuator mechanism may be turned with a screwdriver to help align the keys of the actuator mechanism shaft with the key slots in actuator brake.

(1) Install rubber damper (8), actuator brake (7), and spacer (5) in actuator mechanism (3).

(2) Install motor coupler (6) on shaft of actuator motor (2).

(3) Install two shoulder washers (4) in actuator mechanism (3).

(4) Align keys of actuator mechanism (3) shaft with key slots of motor coupler (6) and then install actuator motor (2) on actuator mechanism (3) and secure with two nuts (1).

(5) Install actuator assembly:
Back actuator assembly (Refer to para 4.12).
Foot actuator assembly (Refer to para 4.14).
Tilt actuator assembly (Refer to para 4.16).
Base actuator assembly (Refer to para 4.18).

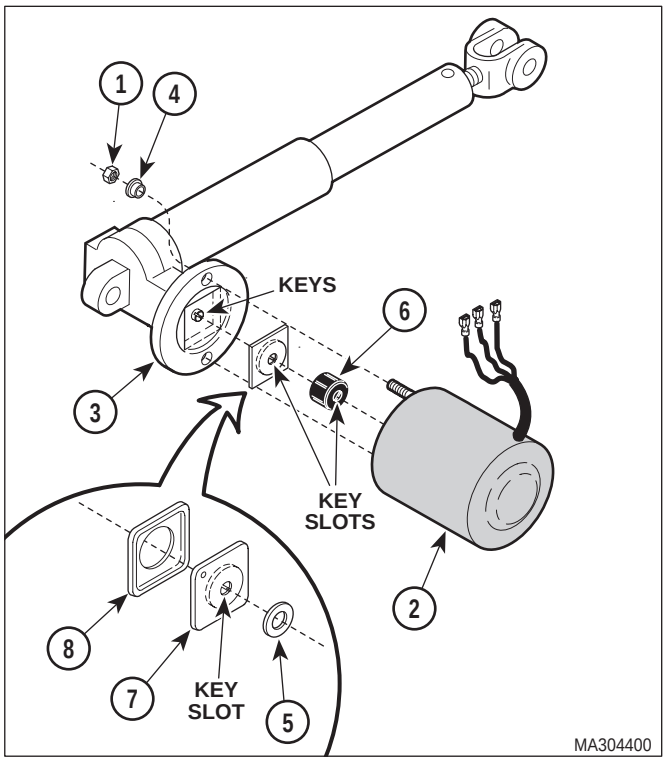

Figure 4-23. Actuator Motor / Actuator Brake Removal / Installation

(6) Check actuator assembly for proper operation. The actuator assembly should run normally and should not make a grinding noise; this indicates that key slots of motor coupler were not aligned properly with keys of actuator mechanism (the grinding noise also indicates that the motor coupler is being damaged). The actuator assembly should brake properly.

4.22 Chain Assembly Adjustment

A. Adjustment

(1) Raise TABLE UP function all the way up.

(2) Unplug table power cord from wall outlet.

(3) Remove two screws (1, Figure 4-24) and front lower shroud (2) from L.H. and R.H. support channels (3).

(4) Loosen four screws (4).

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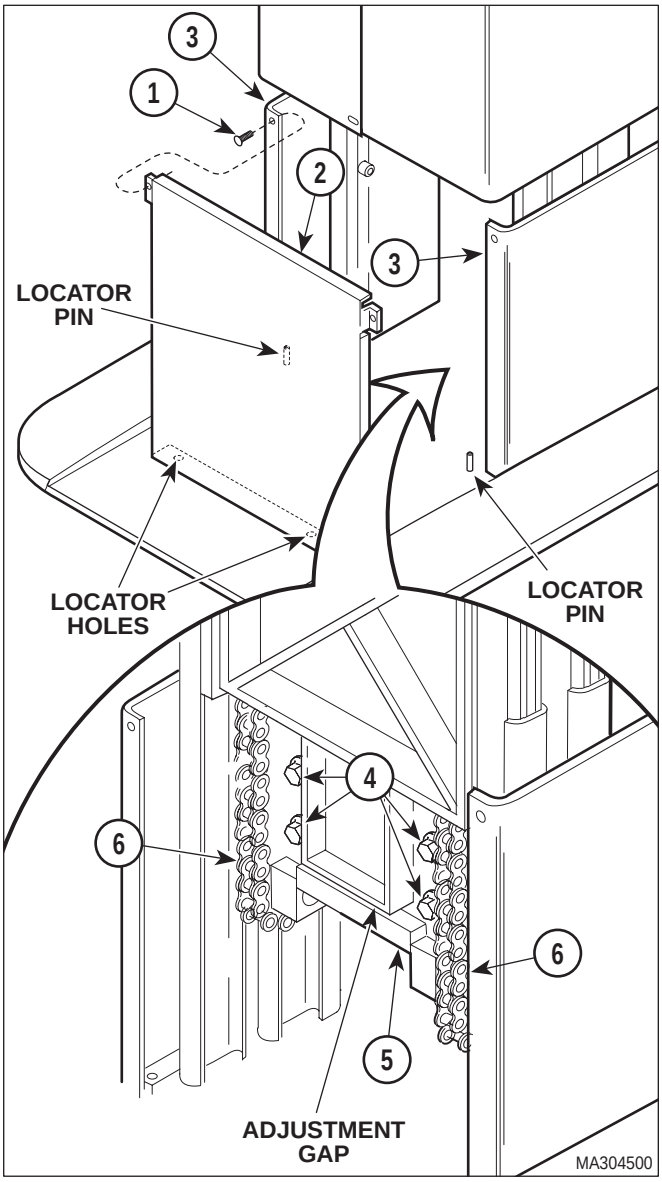

Figure 4-24. Chain Assembly Adjustment

EQUIPMENT ALERT
Adjust chains so they are tight, yet have a slight spring back. Also, adjust chains so there is an equal amount of tension on each chain. Failure to do so will result in chains loosening earlier and uneven wear.

(5) Insert a pry bar or large screwdriver into adjustment gap and pry downward on idler adjustment weldment (5) until chains (6) are tight, but not drum tight. Tighten four screws (4).

(6) Install front lower shroud (2) on L.H. and R.H. support channels (3) and secure with two screws (1), making sure locator pins are inserted thru locator holes of front lower shroud.

(7) Plug table power cord into outlet.

4.23 Headrest Adjustment (Old Style Headrest)

A. Adjustment

(1) Unlock the lock handle (See Figure 4-25).

(2) Loosen setscrew (1, Figure 4-25).

(3) Tighten adjusting screw (2) slightly; then lock the lock handle. Repeat this step until Axis A has the strongest possible holding power, but operation of lock handle is not too difficult.

(4) Tighten setscrew (1).

(5) Unlock the lock handle.

(6) Loosen setscrew (3).

(7) Tighten adjusting screw (4) slightly; then lock the lock handle. Repeat this step until Axis B has the strongest possible holding power, but operation of lock handle is not too difficult.

(8) Tighten setscrew (3).

(9) Lower BACK DOWN function all the way down.

NOTE
The maximum force required to unclamp a locking handle should be 17 lbs. (7.7 kg) and the maximum force required to clamp a locking handle should be 35 lbs. (15.8 kg).

(10) Position headrest assembly as shown in TEST SETUP.

(11) Place a 45 lb. (20.4 kg) weight on headrest assembly at Point C.

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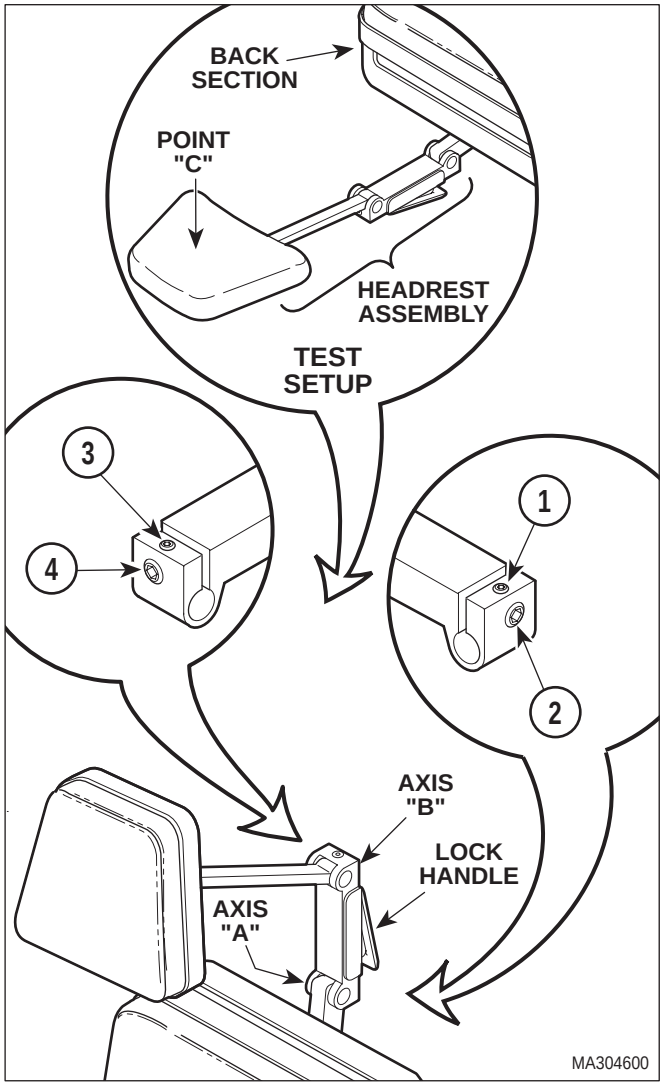

Figure 4-25. Headrest Adjustment

WARNING
Failure to adjust headrest assembly to specifications could result in a failure during a procedure. This could cause severe personal injury to a patient or the need to terminate the procedure.

(12) Observe. The headrest assembly should support the test weight without drifting downward. If not, repeat entire adjustment procedure. If headrest assembly does not meet test standards, do not use headrest assembly.

4.24 Headrest Handles Handle Stops Adjustment (Old Style Headrest)

A. Adjustment

(1) Lock the locking handle (1, Figure 4-26).

(2) While applying pressure on locking handle (1), adjust setscrew (2) in or out until there is a 1/8 in. (3.2 mm) between top of lock handle (1) and headlock bar (3).

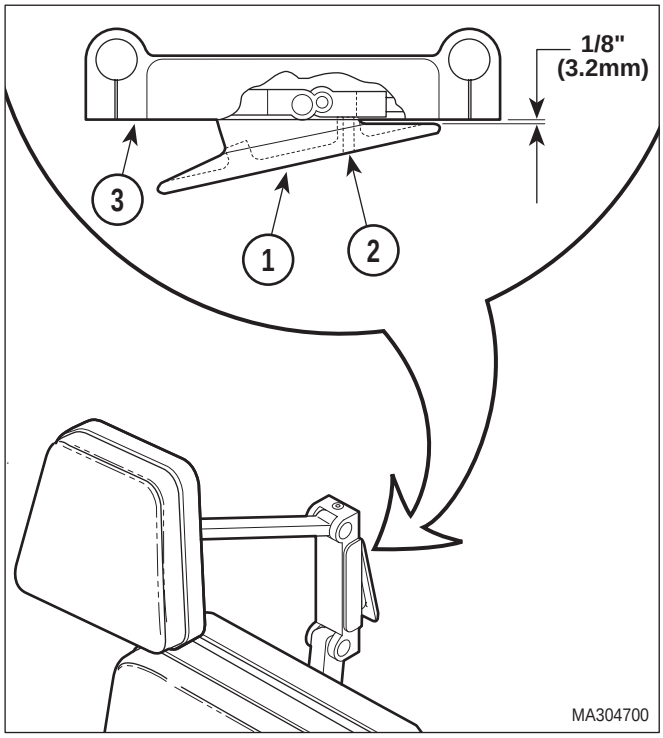

Figure 4-26. Headrest Handles Handle Stops Adjustment

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4.25 Headrest Adjustment (New Style Headrest)

A. Adjustment

(1) Unlock upper lock handle (See Figure 4-27).

(2) Loosen setscrew (1, Figure 4-27).

(3) Tighten adjusting screw (2) slightly; then lock upper lock handle. Repeat this step until Axis A and B have the strongest possible holding power, but operation of upper lock handle is not too difficult.

(4) Tighten setscrew (1).

(5) Unlock lower lock handle.

(6) Loosen setscrew (3).

(7) Tighten adjusting screw (4) slightly; then lock lower lock handle. Repeat this step until Axis C has the strongest possible holding power, but operation of lower lock handle is not too difficult.

(8) Tighten setscrew (3).

(9) Lower BACK DOWN function all the way down.

NOTE
The maximum force required to unclamp a locking handle should be 17 lbs. (7.7 kg) and the maximum force required to clamp a locking handle should be 35 lbs. (15.8 kg).

(10) Position headrest assembly as shown in TEST SETUP.

(11) Place a 45 lb. (20.4 kg) weight on headrest assembly at Point D.

WARNING
Failure to adjust headrest assembly to specifications could result in a failure during a procedure. This could cause severe personal injury to a patient or the need to terminate the procedure.

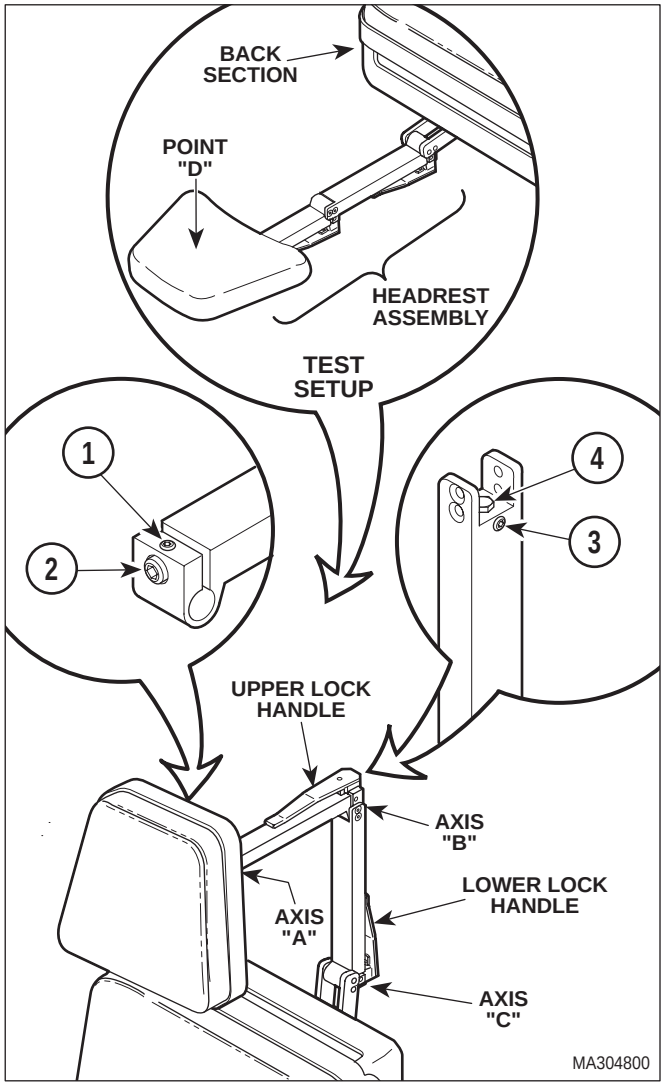

Figure 4-27. Headrest Adjustment

(12) Observe. The headrest assembly should support the test weight without drifting downward. If not, repeat entire adjustment procedure. If headrest assembly does not meet test standards, do not use headrest assembly.

4.26 Headrest Handles Handle Stops Adjustment (New Style Headrest)

A. Adjustment

(1) Loosen nut (1, Figure 4-28).

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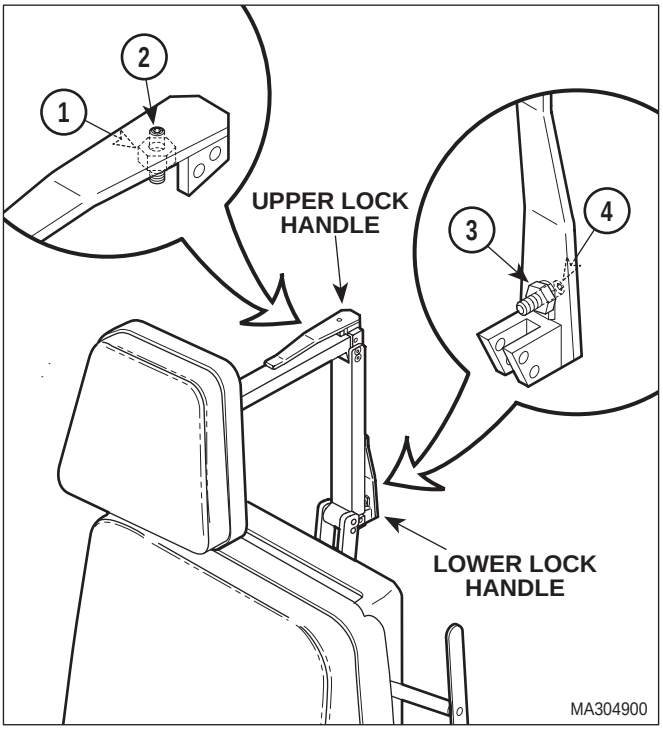

Figure 4-28. Headrest Handles Handle Stops Adjustment

(2) Push on upper lock handle until it reaches a point where the upper lock handle wants to lock itself by going over center; then allow upper lock handle to go over center a few degrees. Hold the upper lock handle in this position and adjust stop screw (2) so the upper lock handle will be forced to stop in this position each time it is locked.

(3) Tighten nut (1).

(4) Loosen nut (3).

(5) Push on lower lock handle until it reaches a point where the lower lock handle wants to lock itself by going over center; then allow lower lock handle to go over center a few degrees. Hold the lower lock handle in this position and adjust stop screw (4) so the lower lock handle will be forced to stop in this position each time it is locked.

(6) Tighten nut (3).

4.27 Typical Foot Pedal Foot Switch Removal / Installation

A. Removal

(1) Remove two screws (1, Figure 4-29) and partially separate foot switch bracket (2) from foot control casting (3).

(2) Remove screw (4), spacer (5), and pedal (6) from foot switch bracket (2).

(3) Tag and disconnect two wires (7) from terminals of foot switch (8).

(4) Remove two nuts (9), lockwashers (10), screws (11), and foot switch (8) from foot switch bracket (2).

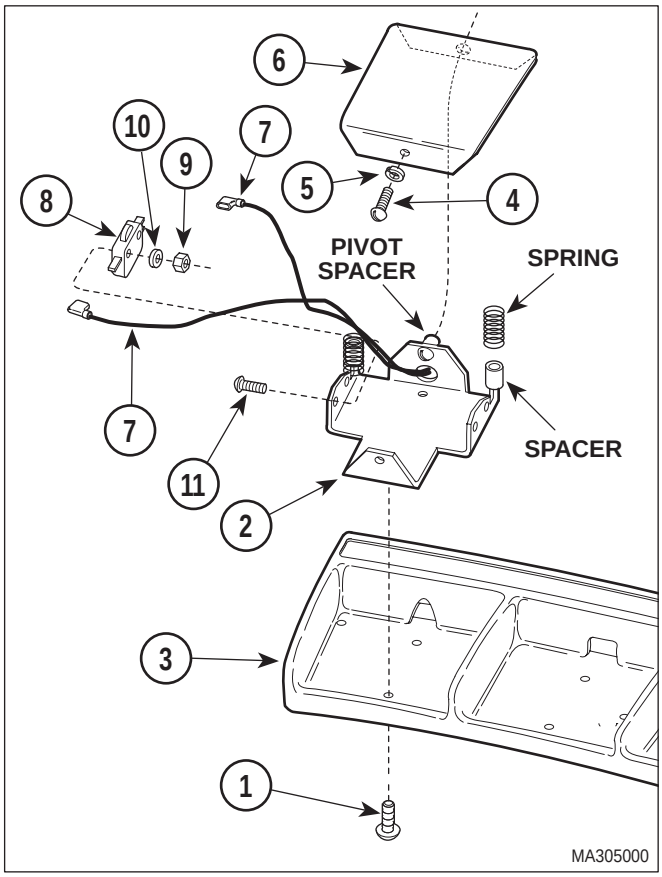

Figure 4-29. Foot Pedal Foot Switch Removal / Installation

B. Installation

(1) Install foot switch (8) on foot switch bracket (2) and secure with two screws (11), lockwashers (10), and two nuts (9).

(2) Connect two wires (7) to terminals of foot switch (8).

(3) Ensure springs and spacers are in position and have not fallen off.

(4) Install pedal (6) on foot switch bracket (2) and secure with spacer (5) and screw (4) making sure pedal is mounted on pivot spacer.

(5) Install foot switch bracket (2) on foot control casting (3) and secure with two screws (1).

4.28 Stirrup Assembly Removal / Installation (New Style Only)

A. Adjustment

(1) Insert screwdriver in access hole and remove screw (1, Figure 4-30) from stirrup assembly (2).

(2) Pull stirrup assembly (2) out of pivot boss (3).

NOTE
Stirrup guide bracket (4) is too wide to removed thru front side; it must be removed out back side.

(3) Remove pivot boss (3) and stirrup guide bracket (4) from stirrup mount weldment (5).

(4) If damaged, remove stirrup index spring (6) from stirrup guide bracket (4).

B. Installation

(1) If removed, install stirrup index spring (6) on stirrup guide bracket (4).

(2) Install stirrup guide bracket (4) in stirrup mount weldment (5) and secure with pivot boss (3).

(3) Slide stirrup assembly (2) thru slot in pivot boss (3) and thru slot in stirrup guide bracket (4).

(4) Install screw (1) on stirrup assembly (2).

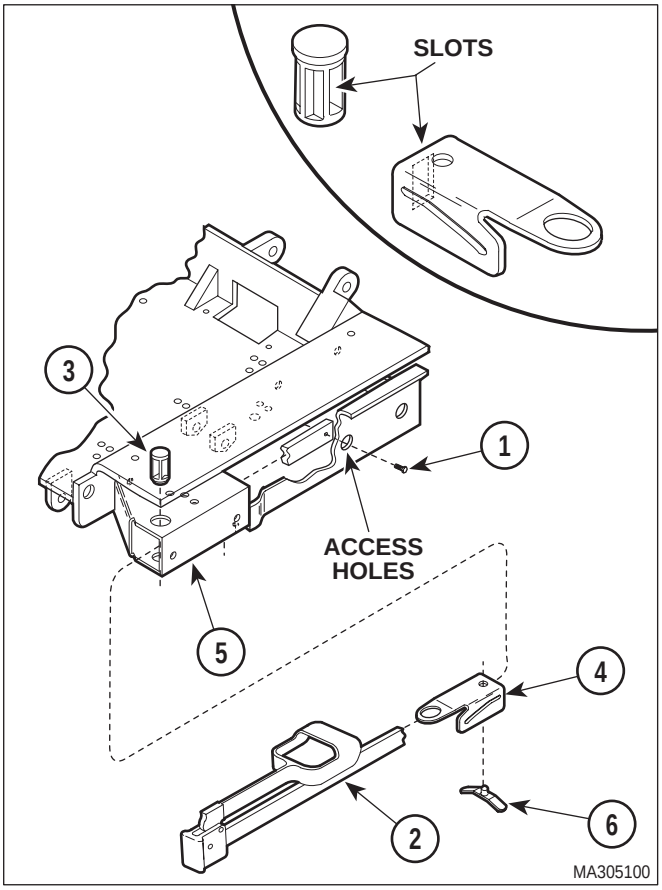

Figure 4-30. Stirrup Assembly Removal / Installation

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SECTION V
SCHEMATICS AND DIAGRAMS

5.1 Electrical Schematics / Wiring Diagrams

Figure 5-1 illustrates the logic / current flow and wiring connections between the electrical components in the 115 VAC domestic table. Figure 5-2 illustrates the logic / current flow and wiring connections between the electrical components in the 220 VAC export table.

See next page for Illustration

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SECTION V
SCHEMATICS AND DIAGRAMS

The electrical schematic / wiring diagram is similar for Units with Serial Numbers AV-1000 Thru AV2217

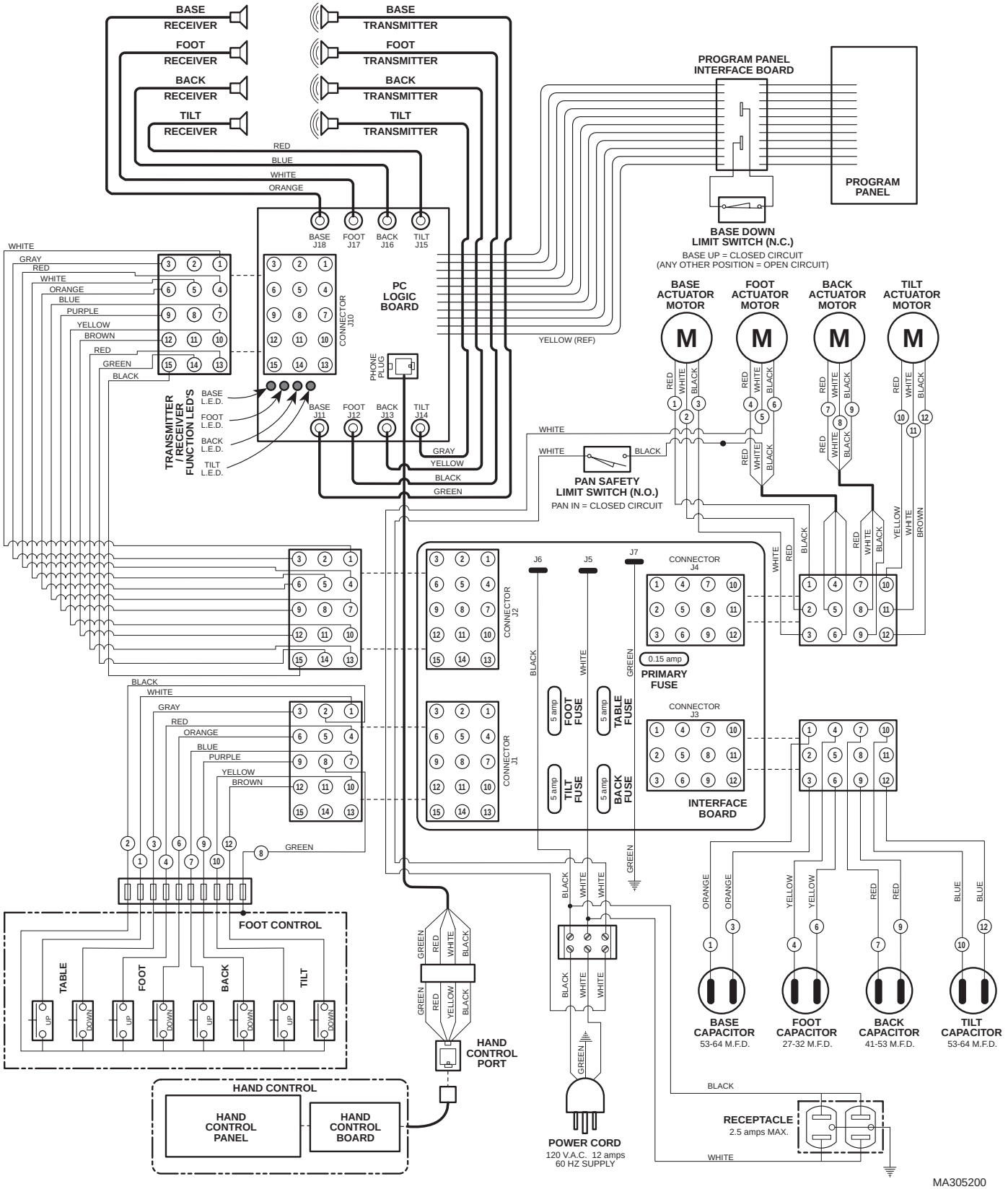

Figure 5-1. Electrical Schematic / Wiring Diagram (Used on 115 VAC Units With Serial Numbers AV-2218 Thru Present)

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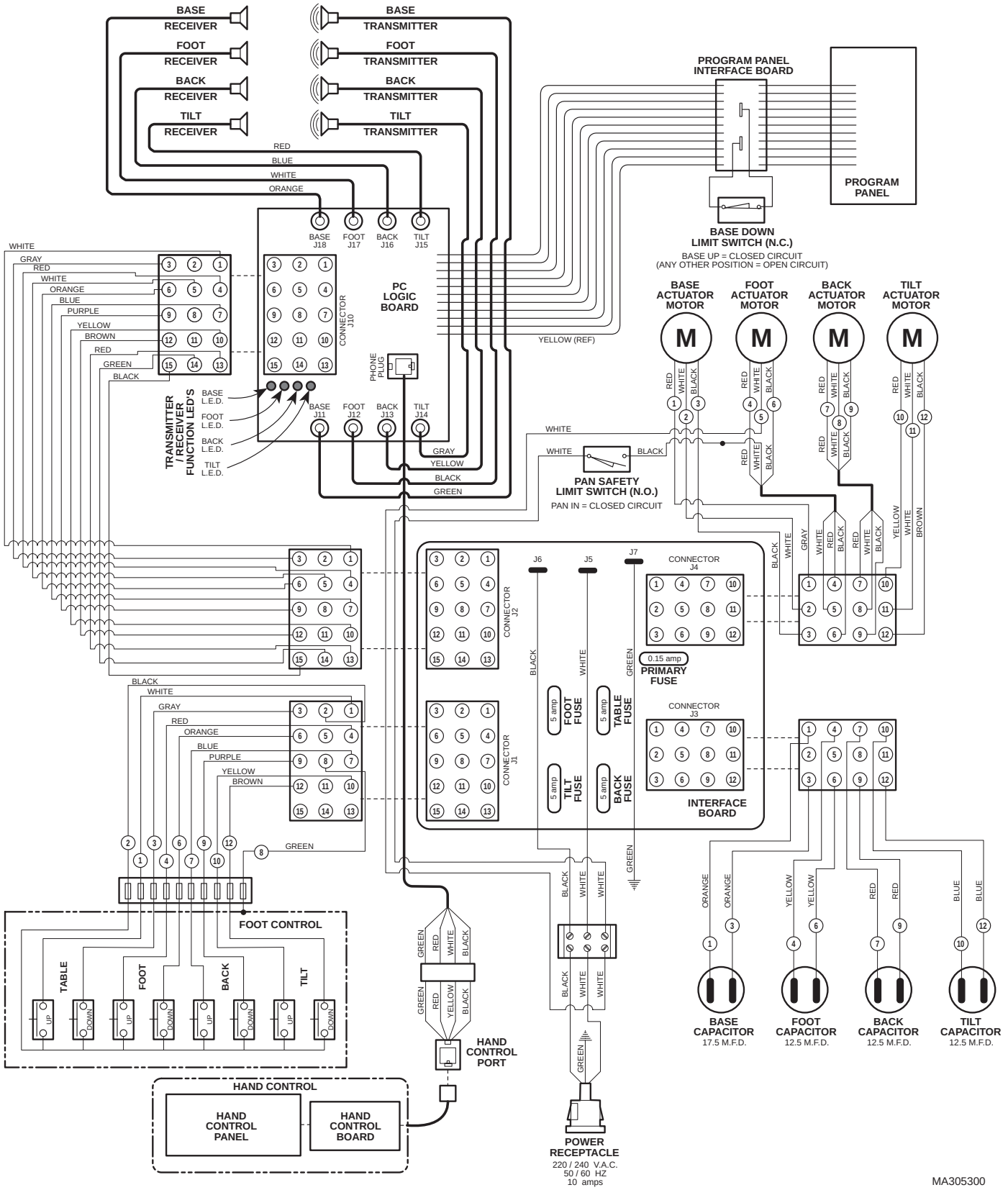

Figure 5-2. Electrical Schematic / Wiring Diagram (Used on 230 VAC Units With Serial Numbers DJ-1000 Thru Present)

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SECTION VI
PARTS LIST

6.1 Introduction

The illustrated parts list provides information for identifying and ordering the parts necessary to maintain the unit in peak operating condition. Refer to paragraph 1.5 for parts ordering information.

The parts list also illustrates disassembly and assembly relationships of parts.

6.2 Description of Columns

The *Item* column of the parts list gives a component its own unique number. The same number is given to the component in the parts illustration. This allows a part number of a component to be found if the technician can visually spot the part on the illustration. The technician simply finds the component in question on the illustration and notes the item number of that component. Then, he finds that item number in the parts list. The row corresponding to the item number gives the technician the part number, a description of the component, and quantity of parts per subassembly. Also, if a part number is known, the location of that component can be determined by looking for the item number of the component on the illustration.

The *Part No.* column lists the MIDMARK part number for that component.

The *Description* column provides a physical description of the component.

The *Qty.* column lists the number of units of a particular component that is required for the subassembly. The letters “AR” denote “as required” when quantities of a particular component cannot be determined, such as: adhesive.

Bullets [•] in the *Part No.* column and the *Description* column show the indenture level of a component. If a component does not have a bullet, it is a main component of that illustration. If a component has a bullet, it is a subcomponent of the next component listed higher in the parts list than itself that does not have a bullet. Likewise, if a component has two bullets, it is a subcomponent of the next component listed higher in the parts list than itself that has only one bullet.

6.3 Torque Specifications and Important Assembly Notes

When specific assembly torque specifications, measurements, or procedures have been identified, by our engineering department, as required to assure proper function of the unit, those torque specifications measurements, and procedures will be noted on the parts illustrations. Adherence to these requirements is essential.

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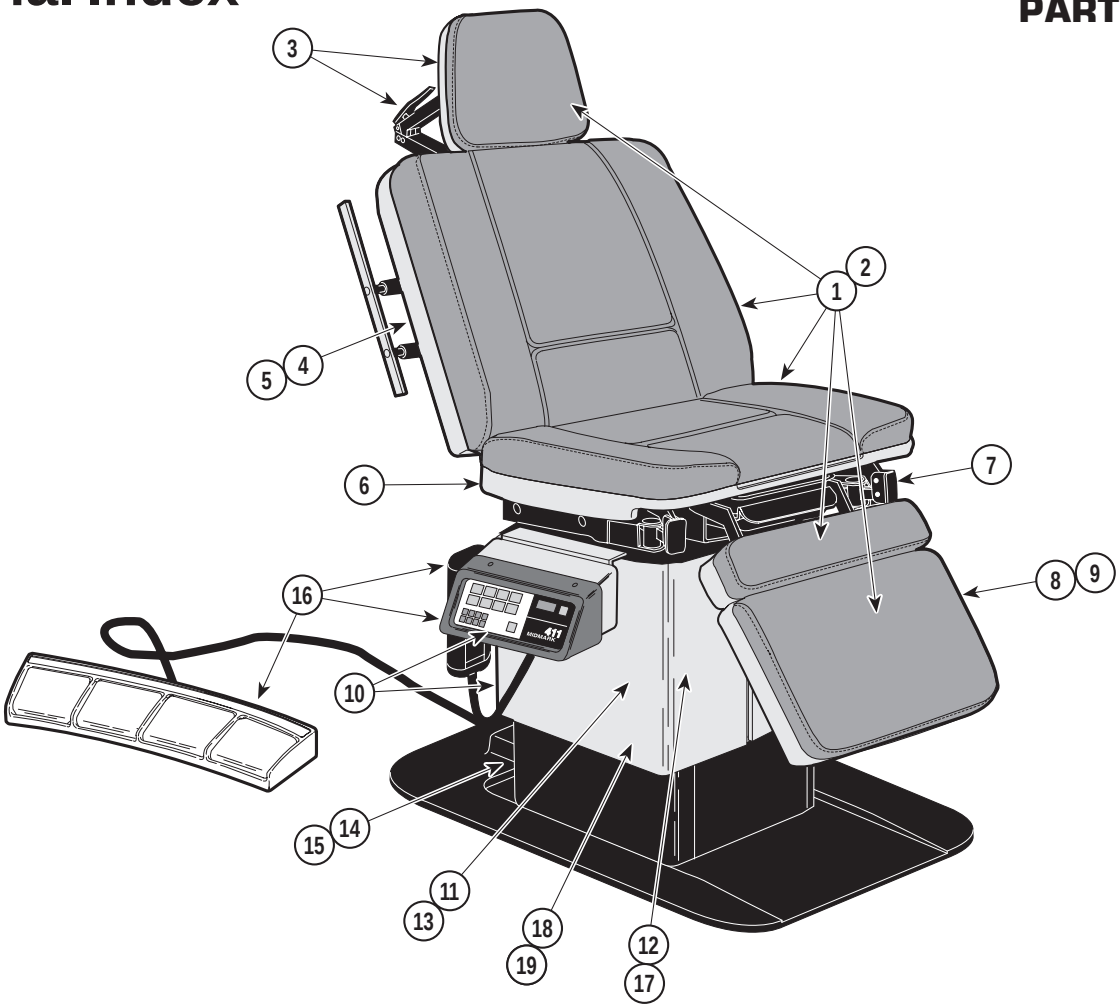
Pictorial Index



MA295000

Used on units with Serial Number AV1000 thru Present

Item	Part No.	Description	Page
	411-001/004	411 Universal Power Table (115 VAC)	6-2
1	•	• Upholstery Set	6-3
2	•	• Upholstery Components	6-4
3	•	• Headrest Components	6-5
4	•	• Back Components	6-6
5	•	• Back and Foot Actuator Assembly	6-7
6	•	• Seat Components	6-8
7	•	• Stirrup Assembly	6-9
8	•	• Foot Extension Components	6-10
9	•	• Footboard Components	6-11
10	•	• Covers and Control Components	6-12
11	•	• Inner Member Components	6-13
12	•	• Base and Tilt Actuator Assembly	6-14
13	•	• Middle Member Components	6-15
14	•	• Base Components - Domestic	6-16
15	•	• Hand Control and Footswitch Electrical Connections	6-18
16	•	• Transmitter Electrical Connections	6-19
17	•	• Motor and Capacitor Electrical Connections	6-20
18	•	• Receiver Electrical Connections	6-21
19	•	• Hand Control	6-22
		OPTIONAL ACCESSORIES	
		Refer to MEDICAL ACCESSORY BOOK {004-0096-00}	
20	• 9A43001	• Chair Arm	9A43
21	• 9A51001	• Facial Pad	9A51
22	• 9A60001	• Restraint Belts	9A60
23	• 9A73001	• Hand Control Assembly	9A73
24	• 9A74002	• Knee Crutch Assembly (AV1000 thru AV3717)	9A74
25	• 9A75001	• Caster Base Assembly	9A75
26	• 9A76003/4	• Base Rail Assembly (AV1000 thru AV3663)	9A76
	• 9A76006/8	• Base Rail Assembly (AV3664 thru Present)	9A76
27	• 9A77001	• I. V. Pole Assembly	9A77
28	• 9A78001	• Vision Block Screen	9A78
29	• 9A79001	• Special Procedures Headrest	9A79
30	• 9A81001	• Articulating Armboard	9A81
31	• 9A82001	• Special Procedures Armboard	9A82
32	• 9A83001	• Instrument Tray Assembly	9A83
33	• 9A84001	• Foot Control Assembly	9A84
34	• 9A85001	• Foot Rest Step Assembly	9A85
35	• 9A144002	• Knee Crutch Assembly (AV3717 thru Present)	9A144
36	• 9A179002	• Fixed Armboard	9A179
37	• 9A182001	• Welch Allyn Hanger Assembly	9A182
38	• 9A197001	• Swivel Wheel Caster Assembly	9A197
39	• 9A208002	• Knee Crutch Assembly (AV3718 thru Present)	9A208

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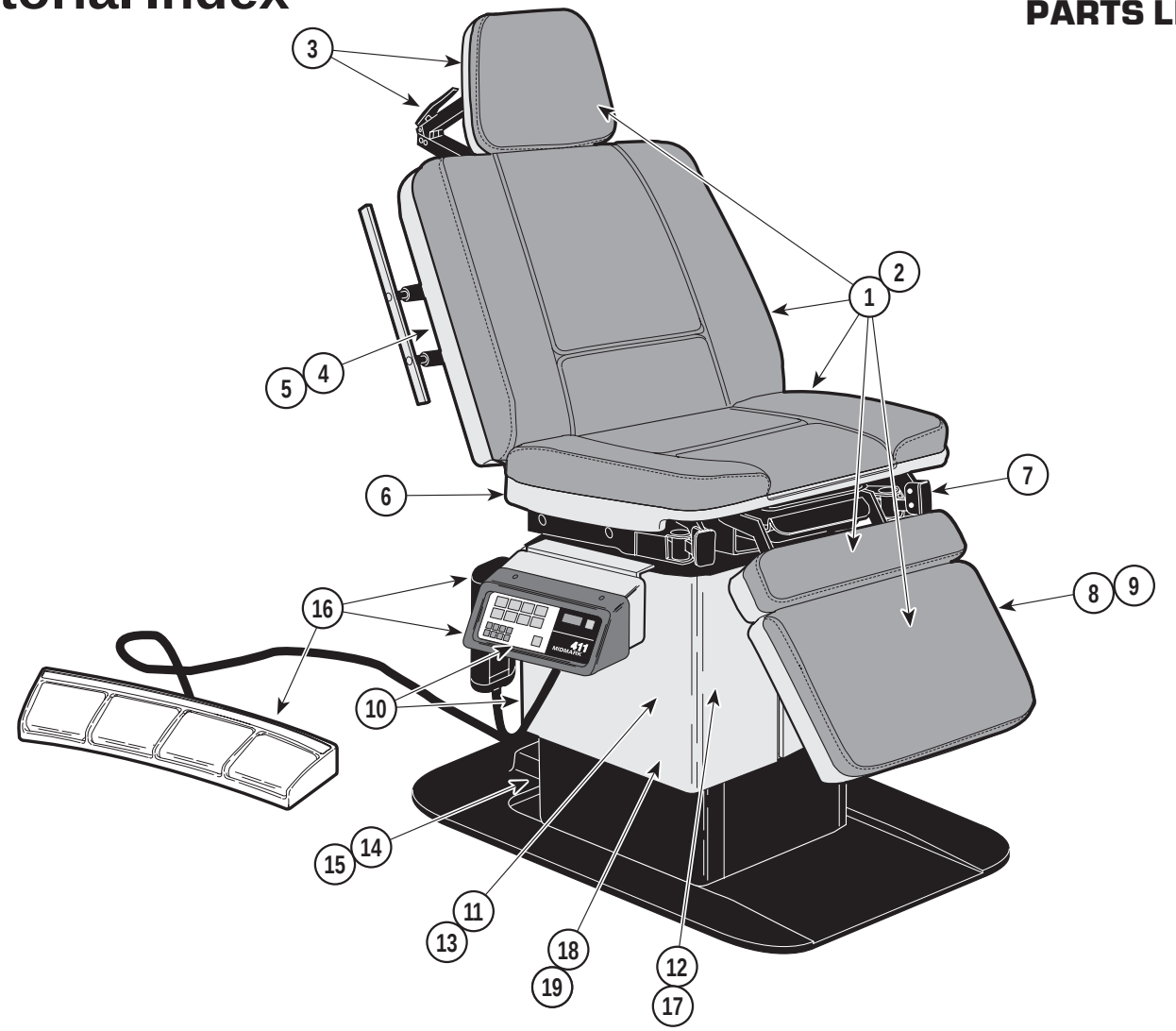

MA295000

Used on units with Serial Number DJ1000 thru Present

Item	Part No.	Description	Page
	411-005/006	411 Universal Power Table - Export 220/240 VAC)	6-2.1
1	•	• Upholstery Set	6-3
2	•	• Upholstery Components	6-4.1
3	•	• Headrest Components	6-5.1
4	•	• Back Components	6-6.1
5	•	• Back and Foot Actuator Assembly	6-7
6	•	• Seat Components	6-8.1
7	•	• Stirrup Assembly	6-9.2
8	•	• Foot Extension Components	6-10
9	•	• Footboard Components	6-11
10	•	• Covers and Control Components	6-12.2
11	•	• Inner Member Components	6-13
12	•	• Base and Tilt Actuator Assembly	6-14
13	•	• Middle Member Components	6-15
14	•	• Base Components - Export	6-17
15	•	• Hand Control and Footswitch Electrical Connections	6-18
16	•	• Transmitter Electrical Connections	6-19
17	•	• Motor and Capacitor Electrical Connections	6-20
18	•	• Receiver Electrical Connections	6-21
19	•	• Hand Control	6-22

Item	Part No.	Description	Page
		OPTIONAL ACCESSORIES	
		Refer to MEDICAL ACCESSORY BOOK {004-0096-00}	
20	• 9A43001	• Chair Arm	9A43
21	• 9A51001	• Facial Pad	9A51
22	• 9A60001	• Restraint Belts	9A60
23	• 9A75001	• Caster Base Assembly	9A75
24	• 9A76006/8	• Base Rail Assembly	9A76
25	• 9A77001	• I. V. Pole Assembly	9A77
26	• 9A78001	• Vision Block Screen	9A78
27	• 9A79001	• Special Procedures Headrest	9A79
28	• 9A81001	• Articulating Armboard	9A81
29	• 9A82001	• Special Procedures Armboard	9A82
30	• 9A83001	• Instrument Tray Assembly	9A83
31	• 9A84001	• Foot Control Assembly	9A84
32	• 9A85001	• Foot Rest Step Assembly	9A85
33	• 9A144002	• Knee Crutch Assembly	9A144
34	• 9A179001	• Fixed Armboard	9A179
35	• 9A182001	• Welch Allyn Hanger Assembly	9A182
36	• 9A197001	• Swivel Wheel Caster Assembly	9A197
37	• 9A208002	• Knee Crutch Assembly	9A208

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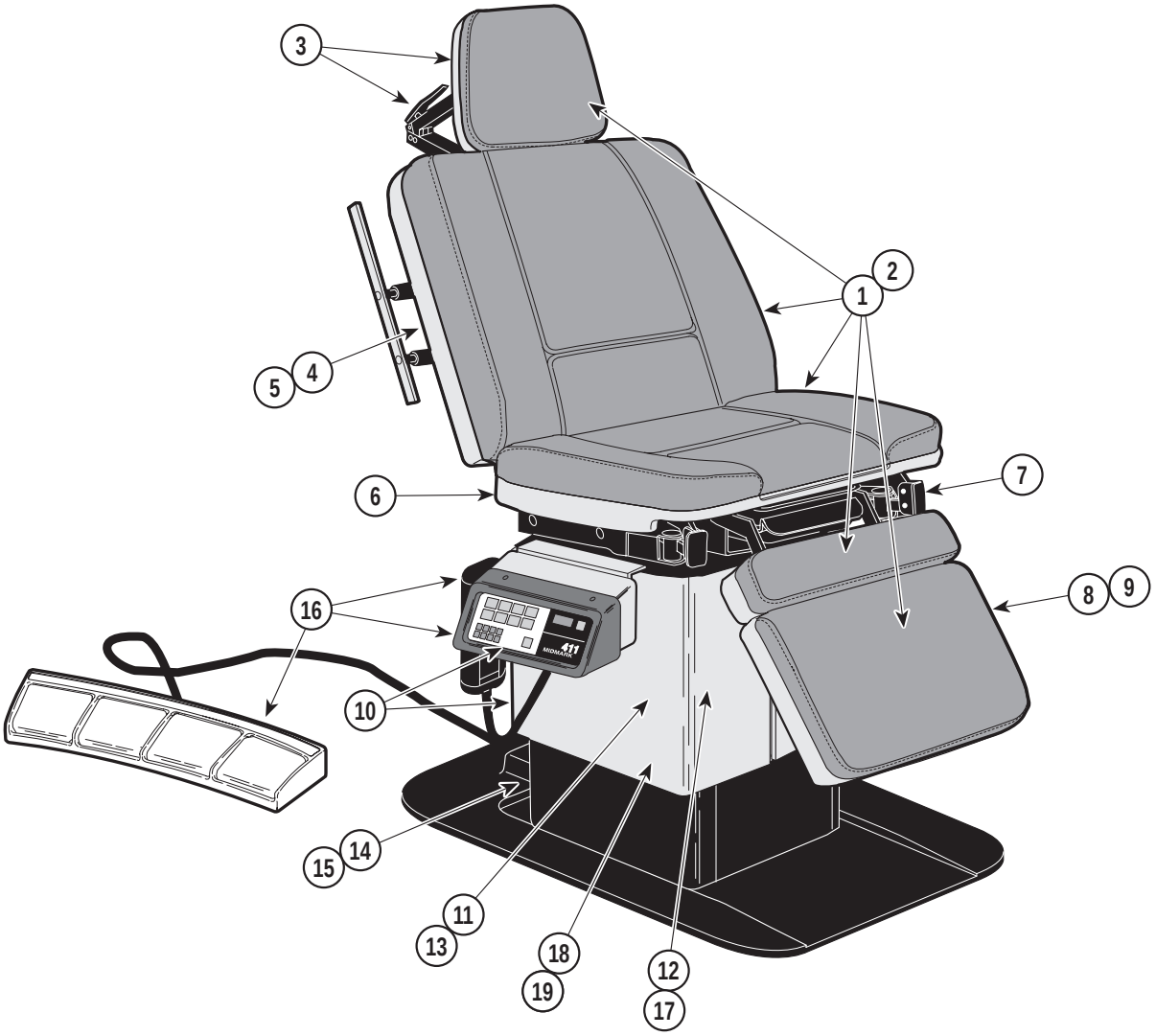

MA295000

Used on units with Serial Number DW1000 thru Present

Item	Part No.	Description	Page
	411-007/008	411 Universal Power Table (100 VAC)	6-2.2
1	•	• Upholstery Set	6-3
2	•	• Upholstery Components	6-4.1
3	•	• Headrest Components	6-5.1
4	•	• Back Components	6-6.1
5	•	• Back and Foot Actuator Assembly	6-7
6	•	• Seat Components	6-8.1
7	•	• Stirrup Assembly	6-9.2
8	•	• Foot Extension Components	6-10
9	•	• Footboard Components	6-11
10	•	• Covers and Control Components	6-12.2
11	•	• Inner Member Components	6-13
12	•	• Base and Tilt Actuator Assembly	6-14
13	•	• Middle Member Components	6-15
14	•	• Base Components - Export	6-17
15	•	• Hand Control and Footswitch Electrical Connections	6-18
16	•	• Transmitter Electrical Connections	6-19
17	•	• Motor and Capacitor Electrical Connections	6-20
18	•	• Receiver Electrical Connections	6-21
19	•	• Hand Control	6-22

Item	Part No.	Description	Page
		OPTIONAL ACCESSORIES	
		Refer to MEDICAL ACCESSORY BOOK {004-0096-00}	
20	• 9A43001	• Chair Arm	9A43
21	• 9A51001	• Facial Pad	9A51
22	• 9A60001	• Restraint Belts	9A60
23	• 9A75001	• Caster Base Assembly	9A75
24	• 9A76006/8	• Base Rail Assembly	9A76
25	• 9A77001	• I. V. Pole Assembly	9A77
26	• 9A78001	• Vision Block Screen	9A78
27	• 9A79001	• Special Procedures Headrest	9A79
28	• 9A81001	• Articulating Armboard	9A81
29	• 9A82001	• Special Procedures Armboard	9A82
30	• 9A83001	• Instrument Tray Assembly	9A83
31	• 9A84001	• Foot Control Assembly	9A84
32	• 9A85001	• Foot Rest Step Assembly	9A85
33	• 9A144002	• Knee Crutch Assembly	9A144
34	• 9A179001	• Fixed Armboard	9A179
35	• 9A182001	• Welch Allyn Hanger Assembly	9A182
36	• 9A197001	• Swivel Wheel Caster Assembly	9A197
37	• 9A208002	• Knee Crutch Assembly	9A208

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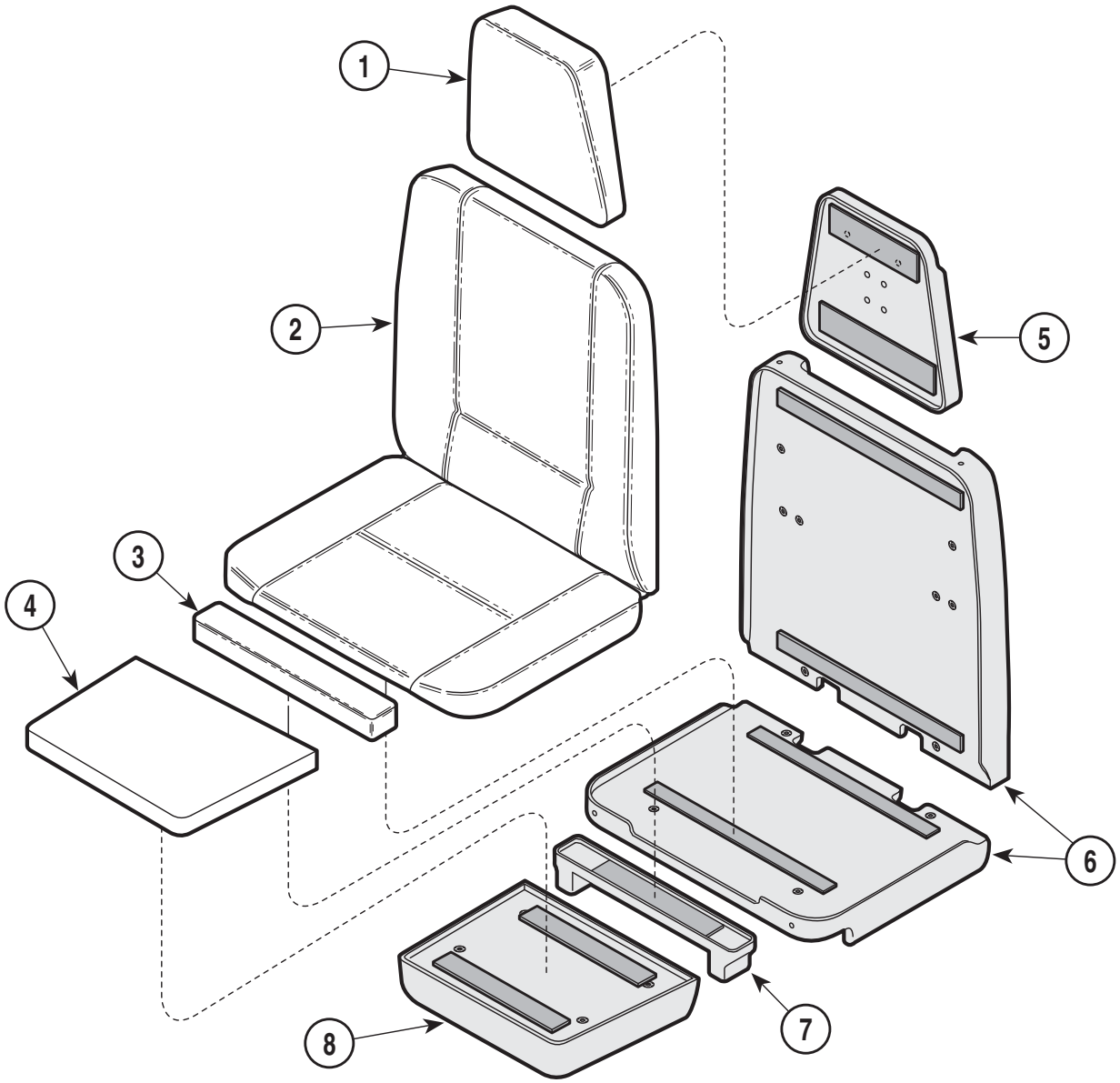
Upholstered Set



Color Selector.....www.midmark.com

Item	Part No.	Description	Qty.
	002-0258-XX	Upholstery Set (Includes Items 1 thru 4 [* Specify Color])	1
1	• 028-0141-XX	• Upholstered Headrest (* Specify Color)	1
2	• 028-0140-XX	• Upholstered Back & Seat (* Specify Color)	1
3	• 028-0139-XX	• Upholstered Leg (* Specify Color)	1
4	• 028-0138-XX	• Upholstered Footboard (* Specify Color)	1
5		Headboard Assembly (Refer to "Upholstery Components" Elsewhere)	Ref
6		Backrest Assembly (Refer to "Upholstery Components" Elsewhere)	Ref
7		Legboard Assembly (Refer to "Upholstery Components" Elsewhere)	Ref
8		Footboard Assembly (Refer to "Upholstery Components" Elsewhere)	Ref

* Click on the Color Selector link above to see available colors.

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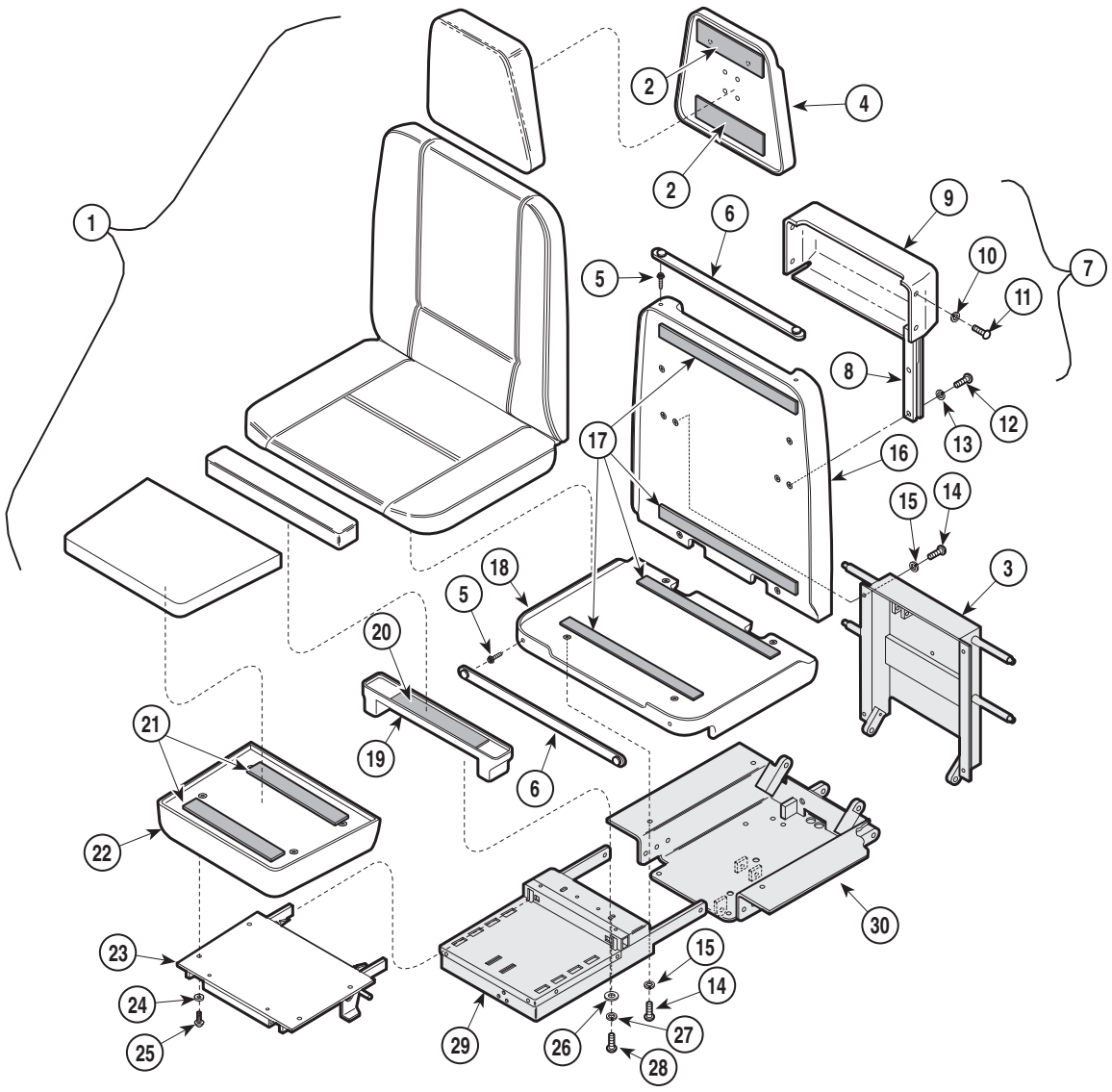
Upholstery Components



MA277702

Used on units with Serial Number AV-1000 thru AV-3365

Item	Part No.	Description	Qty.
1		Upholstery (Refer to "Upholstery Set" Elsewhere)	Ref
2	053-0131-08	Velcro	2
3		Back Weldment (Refer to "Back Components" Elsewhere)	Ref
4	029-0464-00	Headboard Assembly	1
5	016-0022-00	Stud	4
6	029-0407-00	Paper Tear Strip	2
7	*N.L.A.*	Paper Holder Assembly (Includes Items 8 thru 11)	1
8	• *N.L.A.*	• Slide R.H. (Shown)	1
	• *N.L.A.*	• Slide L.H.	1
9	• 053-0209-00	• Paper Roll Holder	1
10	• 045-0001-39	• Washer	4
11	• 040-0008-29	• Screw	4
12	040-0008-31	Screw	6
13	045-0001-10	Lockwasher	6
14	040-0250-63	Screw	8
15	045-0001-23	Lockwasher	8
16	029-0463-00	Backrest Assembly	1
17	053-0131-04	Velcro	4
18	029-0462-00	Seat Cover Assembly	2
19	029-0574-00	Leg Board Cover	1
20	053-0131-08	Velcro	1
21	053-0131-02	Velcro	2
22	029-0585-00	Footboard Assembly	1
23		Footboard Weldment (Refer to "Footboard Components" Elsewhere)	Ref
24	045-0001-03	Lockwasher	4
25	040-0250-44	Screw	4
26	045-0001-04	Washer	2
27	045-0001-00	Washer	2
28	040-0010-43	Screw	2
29		Foot Extension (Refer to "Foot Extension Components" Elsewhere)	Ref
30		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref

"N.L.A. denotes "No Longer Available

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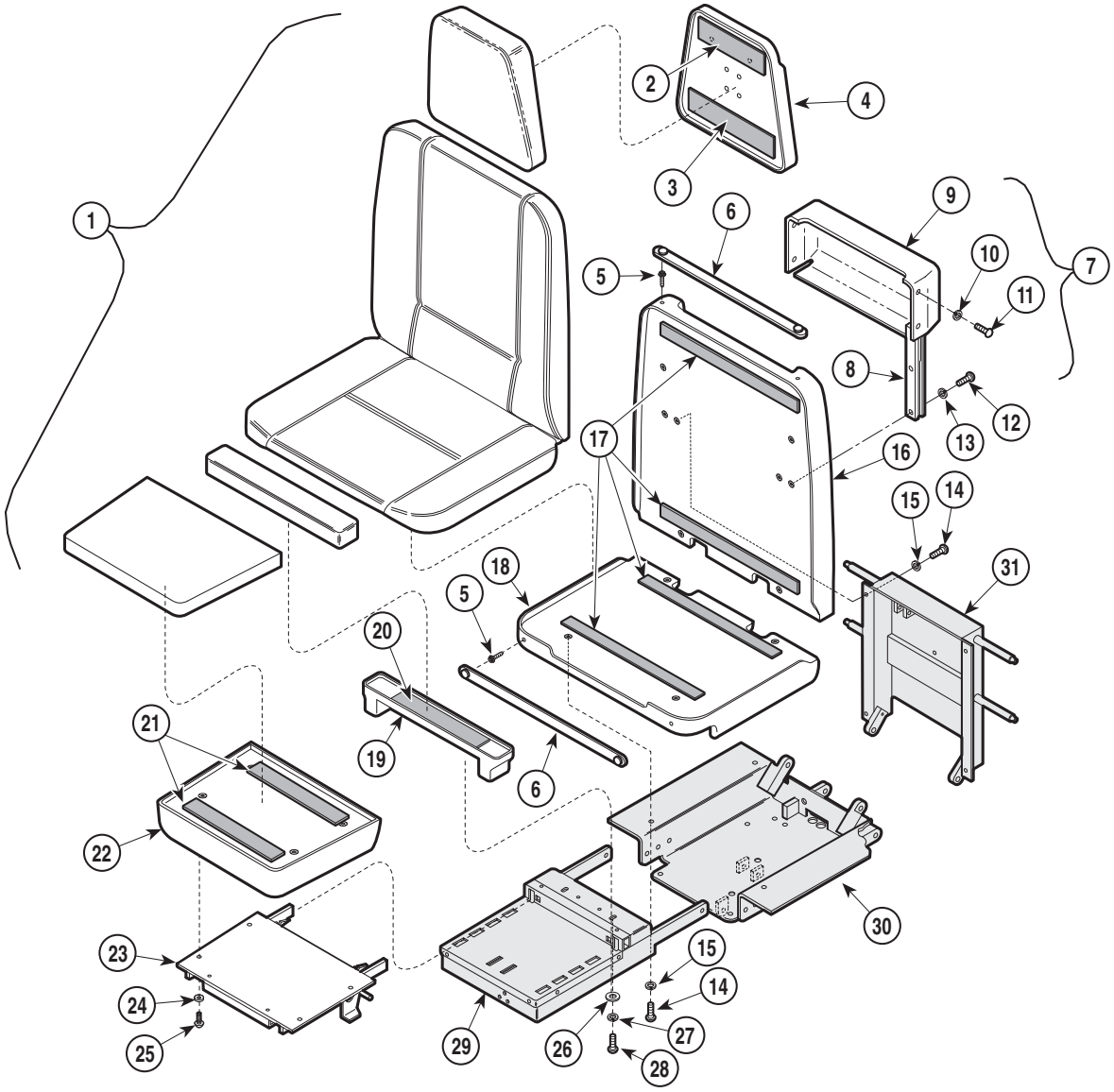
Upholstery Components



MA277703

Used on units with Serial Number AY1006 thru Present

Item	Part No.	Description	Qty.
1		Upholstery (Refer to "Upholstery Set" Elsewhere)	Ref
2	053-0131-08	Velcro	1
3	053-0131-02	Velcro	1
4	~~029-0699-00~~	Headboard Assembly	1
5	016-0022-00	Stud	4
6	029-0407-00	Paper Tear Strip	2
7	*N.L.A.*	Paper Holder Assembly (Includes Items 8 thru 11)	1
8	• *N.L.A.*	• Slide R.H. (Shown)	1
	• *N.L.A.*	• Slide L.H.	1
9	• 053-0209-00	• Paper Roll Holder	1
10	• 045-0001-39	• Washer	4
11	• 040-0008-29	• Screw	4
12	040-0008-31	Screw	6
13	045-0001-10	Lockwasher	6
14	040-0250-63	Screw	8
15	045-0001-23	Lockwasher	8
16	029-1274-00	Backrest Assembly	1
17	053-0131-04	Velcro	4
18	029-1275-00	Seat Cover Assembly	2
19	029-0574-00	Leg Board Cover	1
20	053-0131-08	Velcro	1
21	053-0131-02	Velcro	2
22	029-0585-00	Footboard Assembly	1
23		Footboard Weldment (Refer to "Footboard Components" Elsewhere)	Ref
24	045-0001-03	Lockwasher	4
25	040-0250-44	Screw	4
26	045-0001-04	Washer	2
27	045-0001-00	Washer	2
28	040-0010-43	Screw	2
29		Foot Extension (Refer to "Foot Extension Components" Elsewhere)	Ref
30		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref
31		Back Weldment (Refer to "Back Components" Elsewhere)	Ref

"N.L.A. denotes "No Longer Available

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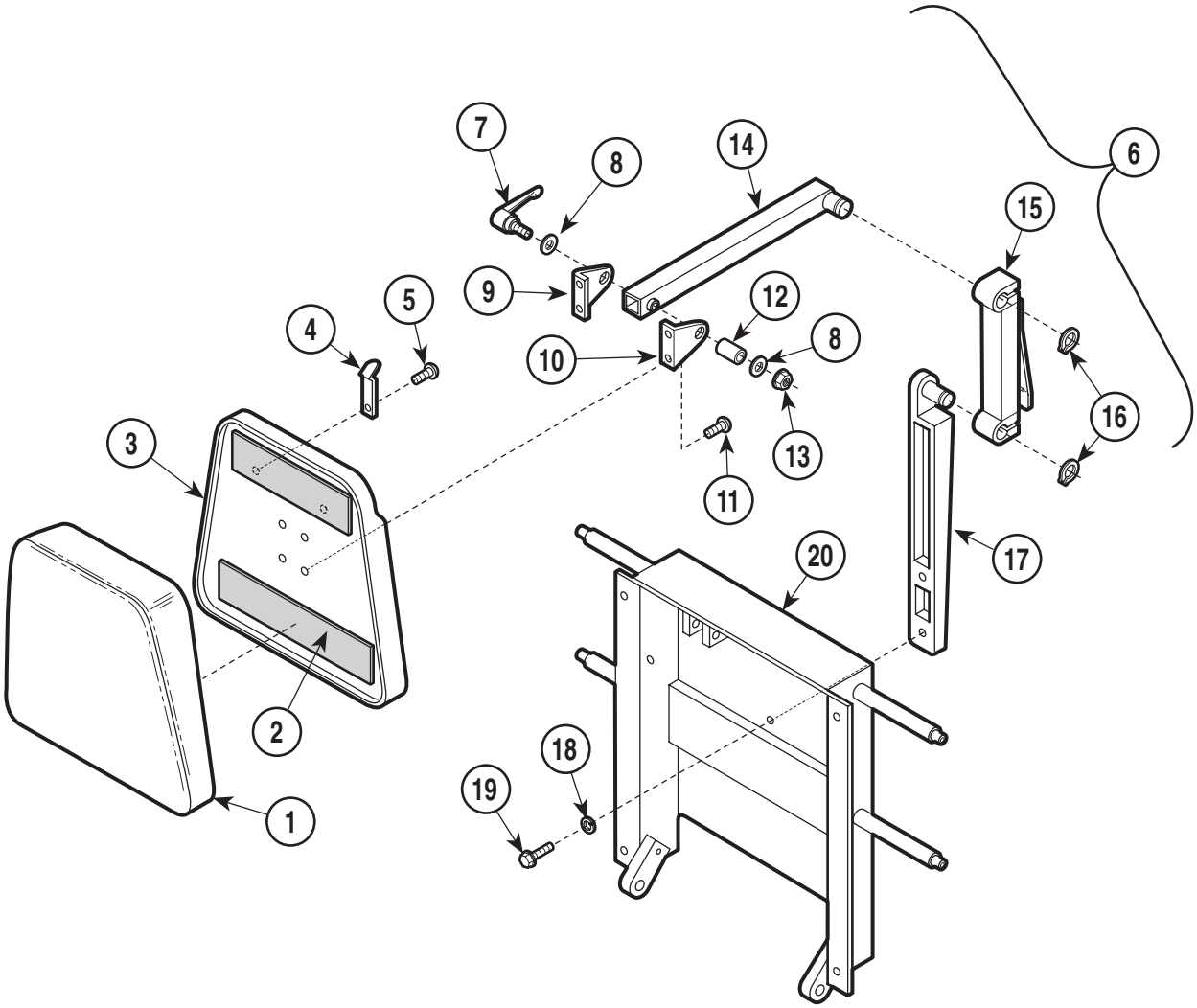
Headrest Components



MA258700

Used on units with Serial Number AV-1000 thru AV-1972

Item	Part No.	Description	Qty.
1		Upholstered Headrest (Refer to "Upholstered Components" Elsewhere)	Ref
2	053-0131-08	Velcro	2
3		Headboard Assembly (Refer to "Upholstery Components" Elsewhere)	Ref
4	058-0001-00	Bag Clip	2
5	040-0006-00	Screw	2
6	• *(N.S.P.)*	Arm Headlock Assembly (Includes Items 7 thru 17)	1
7	• *(N.S.P.)*	• Handle	1
8	• *(N.S.P.)*	• Bearing Washer	2
9	• *(N.S.P.)*	• Bracket Weldment	1
10	• *(N.S.P.)*	• Headlock Bracket (Large)	1
11	• *(N.S.P.)*	• Screw	4
12	• *(N.S.P.)*	• Lock Tube	1
13	• *(N.S.P.)*	• Nut	1
14	• *(N.S.P.)*	• Headrest Top Arm	1
15	• *(N.S.P.)*	• Headlock Assembly	1
16	• *(N.S.P.)*	• Retaining Ring	2
17	• *(N.S.P.)*	• Headrest Bottom Arm	1
18	045-0001-09	Lockwasher	2
19	040-0375-25	Screw	4
20		Back Weldment (Refer to "Back Components" Elsewhere)	Ref

(N.S.P.) Denotes "Non Servicable Part"
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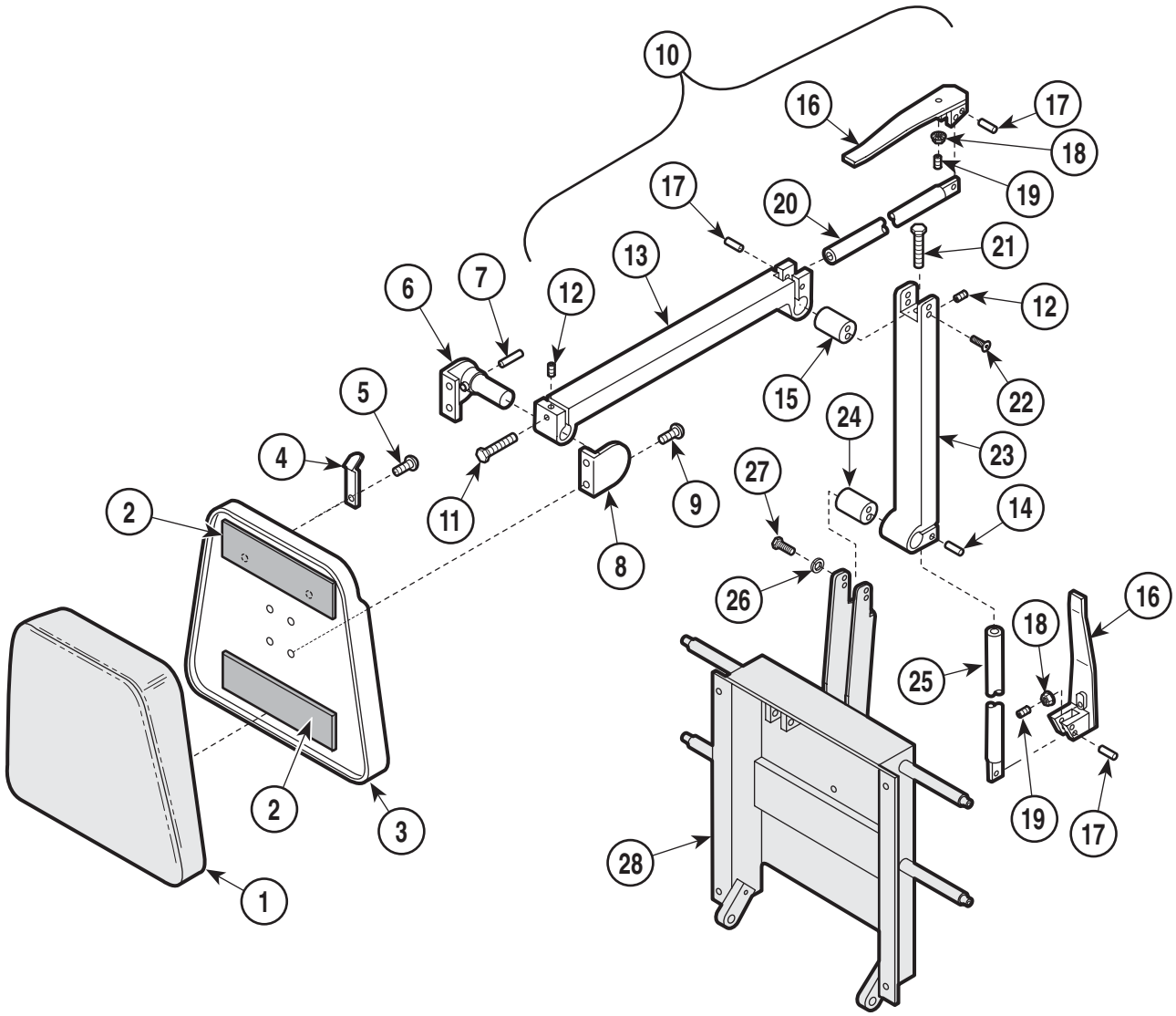
Headrest Components



MA258802

Used on units with Serial Number AV-1972 thru AV-4456 and DJ-1000 thru DJ-1018

Item	Part No.	Description	Qty.
1		Upholstered Headrest (Refer to "Upholstered Components" Elsewhere)	Ref
2	053-0131-08	Velcro	2
3		Headboard Assembly (Refer to "Upholstery Components" Elsewhere)	Ref
4	058-0001-03	Bag Clip	2
5	040-0006-00	Screw	2
6	029-0103-00	Headboard Pivot Assy. (Incl. Item 7)	1
7	• 042-0001-00	• Roll Pin	1
8	030-0124-00	Headboard Pivot Assembly	1
9	040-0010-23	Screw	4
10	029-1100-00	Two Arm Headlock Assembly (Includes Items 11 thru 25)	1
11	• *(N.S.P.)*	• Screw	1
12	• *(N.S.P.)*	• Set Screw	2
13	• *(N.S.P.)*	• Headlock	1
14	• *(N.S.P.)*	• Dowel Pin	2
15	• *(N.S.P.)*	• Pivot Bar	1
16	• *(N.S.P.)*	• Head Pivot Handle	2
17	• *(N.S.P.)*	• Dowel Pin	4
18	• *(N.S.P.)*	• Nut	2
19	• *(N.S.P.)*	• Screw	2
20	• *(N.S.P.)*	• Draw Bar	1
21	• *(N.S.P.)*	• Bolt	1
22	• *(N.S.P.)*	• Screw	4
23	• *(N.S.P.)*	• Base Headlock	1
24	• *(N.S.P.)*	• Pivot Bar	1
25	• *(N.S.P.)*	• Draw Bar	1
26	045-0001-05	Lockwasher	4
27	040-0250-10	Bolt	4
28		Back Weldment (Refer to "Back Components" Elsewhere)	Ref

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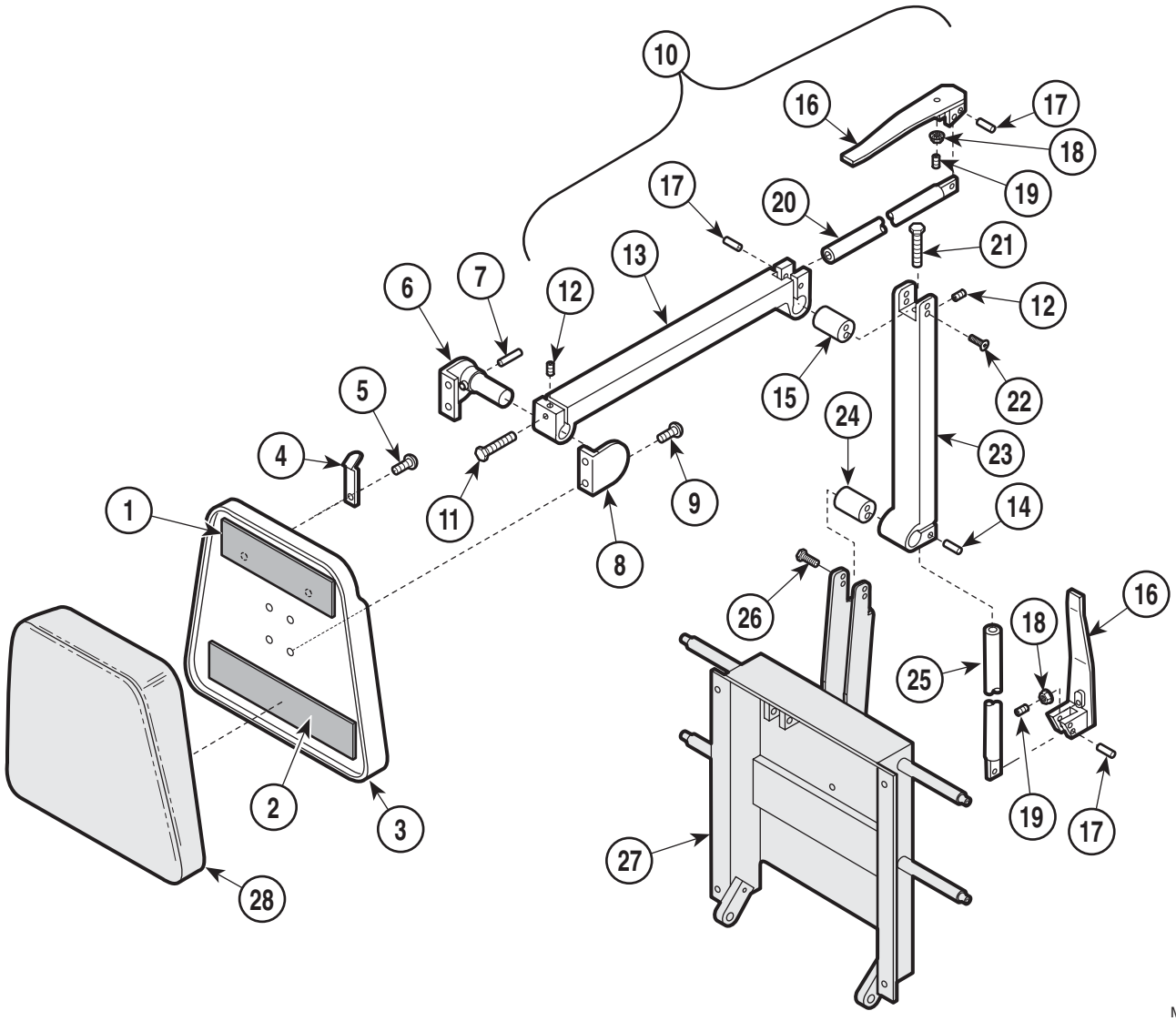
Headrest Components



MA258801

Used on units with Serial Number AV4457 thru AV8567, DJ-1019 thru DJ1173 and DW1000

Item	Part No.	Description	Qty.
1	053-0131-08	Velcro	1
2	053-0131-02	Velcro	1
3		Headboard Assembly (Refer to "Upholstery Components" Elsewhere)	Ref
4	058-0001-03	Bag Clip	2
5	040-0006-00	Screw	2
6	029-0103-02	Headboard Pivot Assembly	1
7	• 042-0001-00	• Roll Pin	1
8	030-0124-03	Headboard Pivot Assembly	1
9	040-0010-23	Screw	4
10	029-1100-02	Two Arm Headlock Assembly (Includes Items 11 thru 25)	1
11	• *(N.S.P.)*	• Screw	1
12	• *(N.S.P.)*	• Set Screw	2
13	• *(N.S.P.)*	• Headlock	1
14	• *(N.S.P.)*	• Dowel Pin	2
15	• *(N.S.P.)*	• Pivot Bar	1
16	• *(N.S.P.)*	• Head Pivot Handle	2
17	• *(N.S.P.)*	• Dowel Pin	4
18	• *(N.S.P.)*	• Nut	2
19	• *(N.S.P.)*	• Screw	2
20	• *(N.S.P.)*	• Draw Bar	1
21	• *(N.S.P.)*	• Bolt	1
22	• *(N.S.P.)*	• Screw	4
23	• *(N.S.P.)*	• Base Headlock	1
24	• *(N.S.P.)*	• Pivot Bar	1
25	• *(N.S.P.)*	• Draw Bar	1
26	040-0250-88	Screw	4
27		Back Weldment (Refer to "Back Components" Elsewhere)	Ref
28		Upholstered Headrest (Refer to "Upholstered Components" Elsewhere)	Ref

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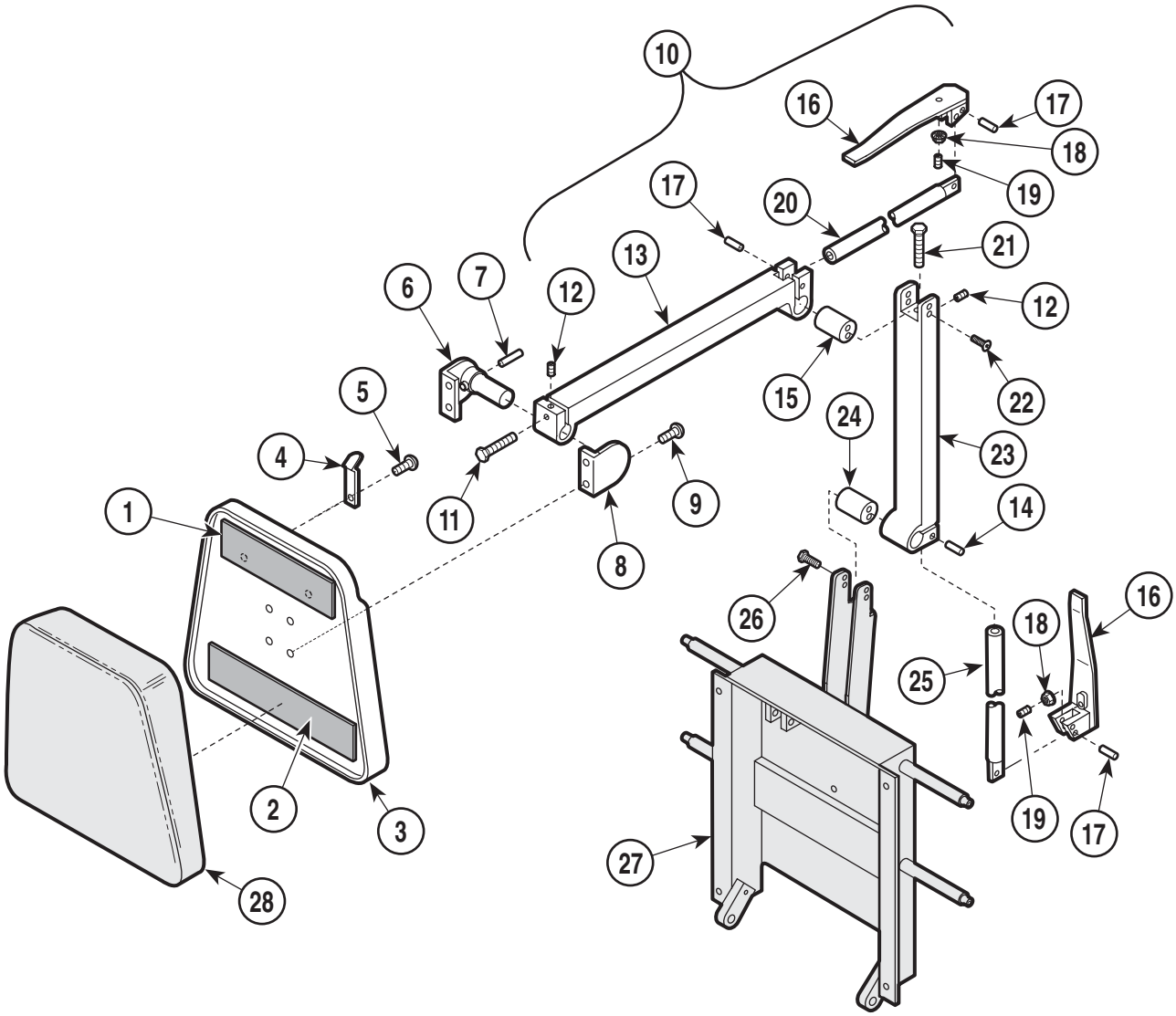
Headrest Components



MA258801

Used on units with Serial Number AV8568, DJ1174 and DW1001 thru Present

Item	Part No.	Description	Qty.
1	053-0131-08	Velcro	1
2	053-0131-02	Velcro	1
3		Headboard Assembly (Refer to "Upholstery Components" Elsewhere)	Ref
4	058-0001-03	Bag Clip	2
5	040-0006-00	Screw	2
6	029-0103-02	Headboard Pivot Assembly	1
7	• 042-0001-00	• Roll Pin	1
8	030-0124-03	Headboard Pivot Assembly	1
9	040-0010-23	Screw	4
10	029-1100-04	Two Arm Headlock Assembly (Includes Items 11 thru 25)	1
11	• *(N.S.P.)*	• Screw	1
12	• *(N.S.P.)*	• Set Screw	2
13	• *(N.S.P.)*	• Headlock	1
14	• *(N.S.P.)*	• Dowel Pin	2
15	• *(N.S.P.)*	• Pivot Bar	1
16	• *(N.S.P.)*	• Head Pivot Handle	2
17	• *(N.S.P.)*	• Dowel Pin	4
18	• *(N.S.P.)*	• Nut	2
19	• *(N.S.P.)*	• Screw	2
20	• *(N.S.P.)*	• Draw Bar	1
21	• *(N.S.P.)*	• Bolt	1
22	• *(N.S.P.)*	• Screw	4
23	• *(N.S.P.)*	• Base Headlock	1
24	• *(N.S.P.)*	• Pivot Bar	1
25	• *(N.S.P.)*	• Draw Bar	1
26	040-0250-88	Screw	4
27		Back Weldment (Refer to "Back Components" Elsewhere)	Ref
28		Upholstered Headrest (Refer to "Upholstered Components" Elsewhere)	Ref

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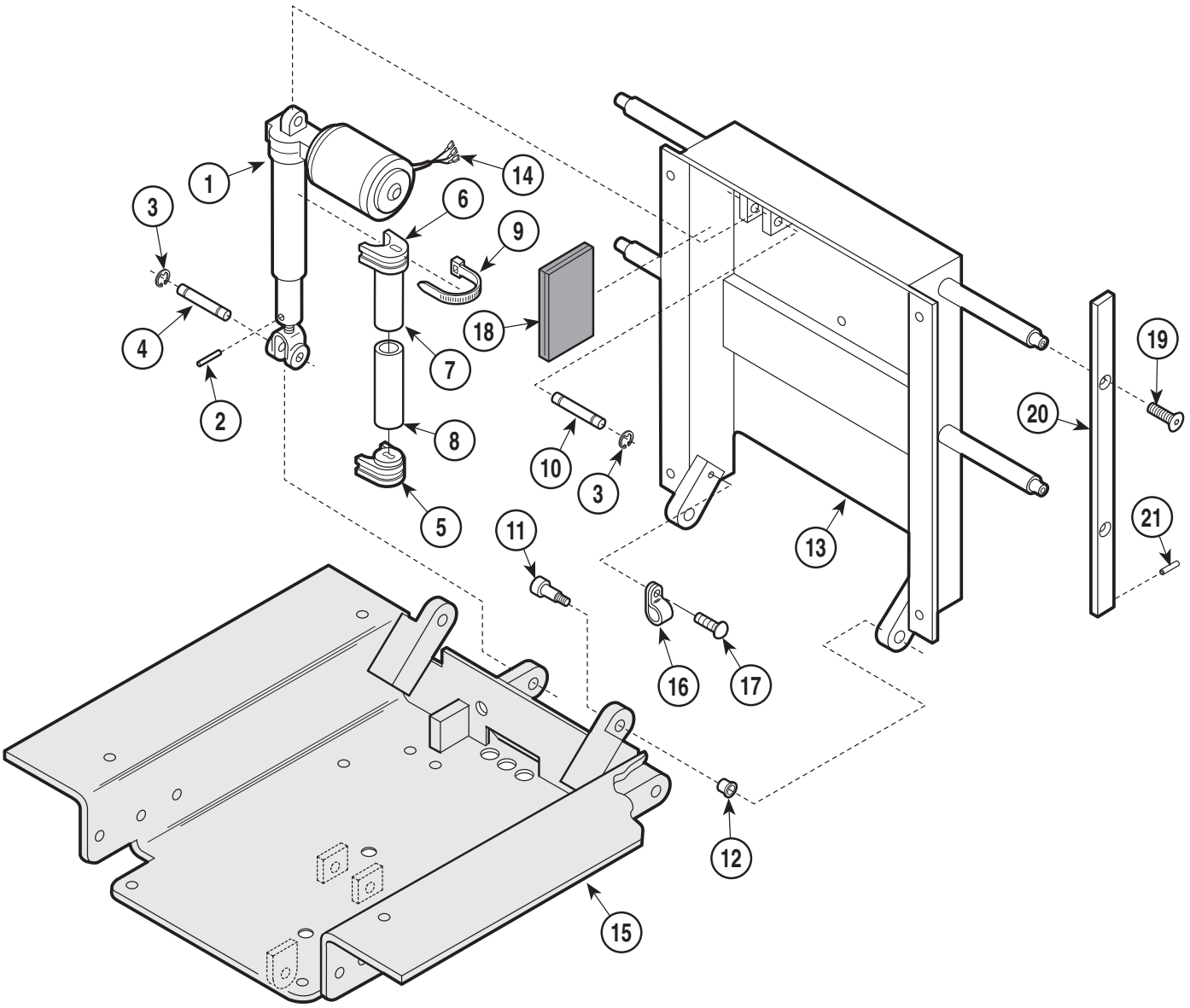
Back Components



MA258401

Used on units with Serial Number AV-1000 thru AV-3365

Item	Part No.	Description	Qty.
1		Back Actuator (Refer to "Back and Foot Actuator Assembly" Elsewhere)	Ref
2	042-0001-07	Roll Pin	1
3	042-0007-02	E-Ring	4
4	042-0048-01	Clevis Pin	1
5	• *N.L.A.*	• Transmitter Mount Small	1
6	*N.L.A.*	Transmitter Assy. (Includes Transmitter Mount Small and Items 7 and 8)	1
	• *N.L.A.*	• Transmitter Mount Small	1
7	• *N.L.A.*	• Transmitter Tube	1
8	• *N.L.A.*	• Sound Tube	1
9	015-0472-00	Cable Tie	2
10	042-0048-02	Clevis Pin	1
11	042-0014-05	Shoulder Screw (Apply Loctite #042-0025-00)	2
12	016-0131-04	Flange Bearing	2
13	030-0568-00	Back Weldment	1
14	015-0312-00	Terminal	3
15		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref
16	015-0001-00	Wire Clip	1
17	040-0010-47	Screw	1
18	054-0085-04	Sound Damp	4
19	040-0375-26	Screw	4
20	051-0377-00	Siderail	2
21	042-0001-02	Roll Pin	2

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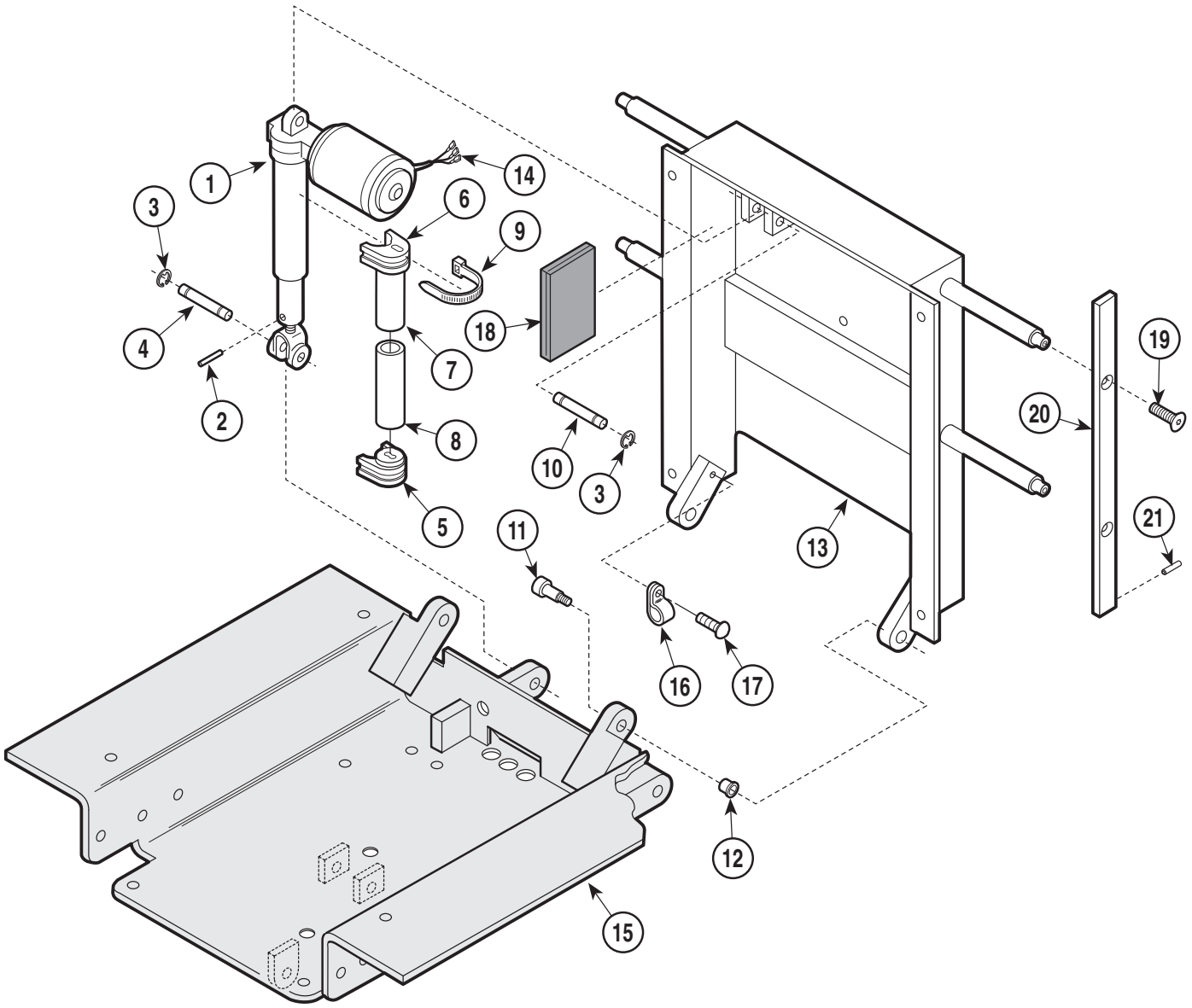
Back Components



MA258401

Used on units with Serial Number AV-3366 thru AV-4456 and DJ-1000 thru DJ-1018

Item	Part No.	Description	Qty.
1		Back Actuator (Refer to Back and Foot Actuator Assembly" Elsewhere)	Ref
2	042-0001-07	Roll Pin	1
3	042-0007-02	E-Ring	4
4	042-0048-01	Clevis Pin	1
5	• *N.L.A.*	• Transmitter Mount Small	1
6	*N.L.A.*	Transmitter Assy. (Includes Transmitter Mount Small and Items 7 and 8)	1
	• *N.L.A.*	• Transmitter Mount Small	1
7	• *N.L.A.*	• Transmitter Tube	1
8	• *N.L.A.*	• Sound Tube	1
9	015-0472-00	Cable Tie	2
10	042-0048-02	Clevis Pin	1
11	042-0014-05	Shoulder Screw (Apply Loctite #042-0025-00)	2
12	016-0131-04	Flange Bearing	2
13	030-0713-00	Back Weldment	1
14	015-0312-00	Terminal	3
15		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref
16	015-0001-00	Wire Clip	1
17	040-0010-47	Screw	1
18	054-0085-04	Sound Damp	4
19	040-0375-26	Screw	4
20	051-0377-00	Siderail	2
21	042-0001-02	Roll Pin	2

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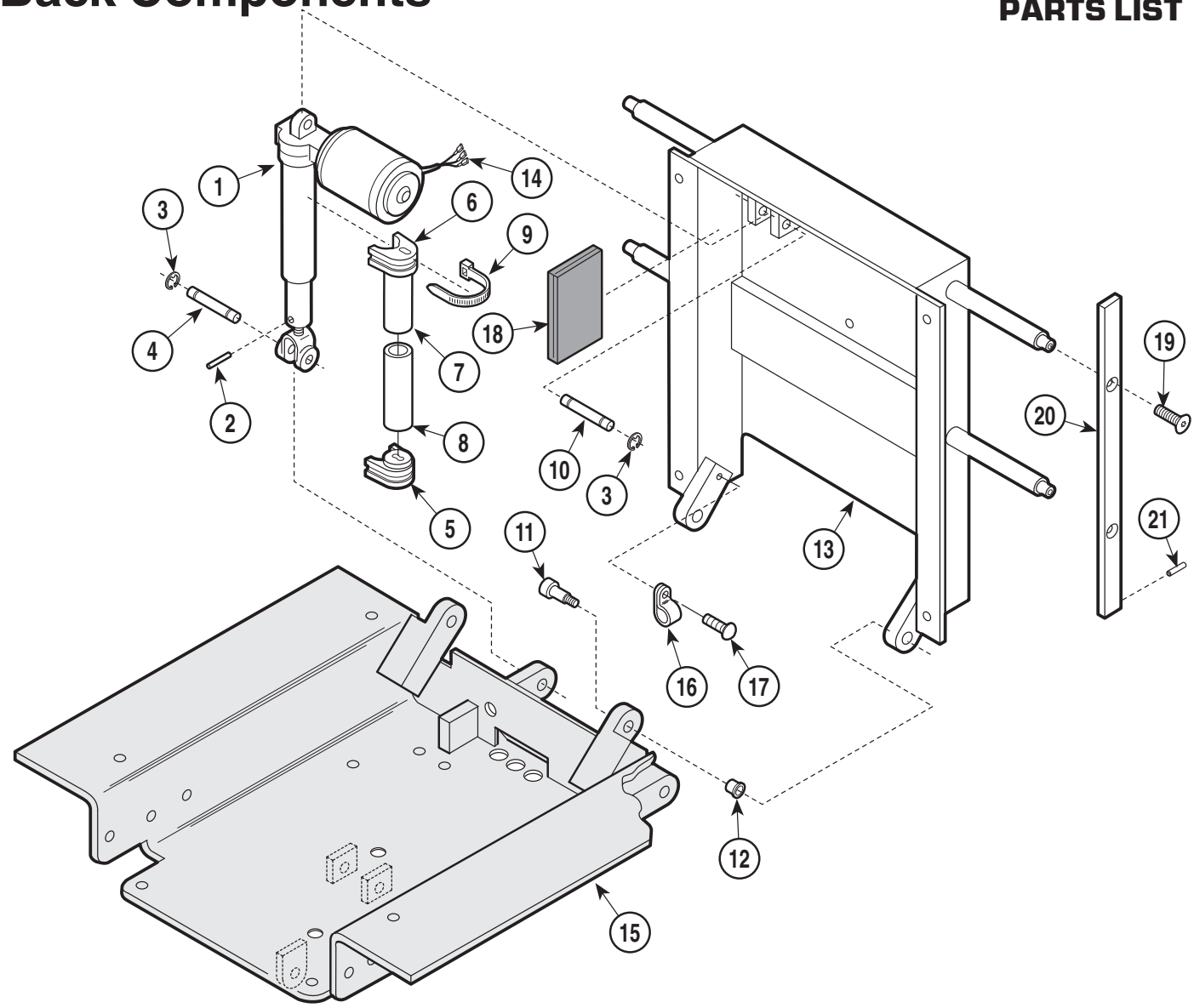
Back Components



MA258401

Used on units with Serial Number AV-3366 thru AV-8714 and DJ-1019 thru DJ-1220

Item	Part No.	Description	Qty.
1		Back Actuator (Refer to Back and Foot Actuator Assembly" Elsewhere)	Ref
2	042-0001-07	Roll Pin	1
3	042-0007-02	E-Ring	4
4	042-0048-01	Clevis Pin	1
5	• *N.L.A.*	• Transmitter Mount Small	1
6	*N.L.A.*	Transmitter Assy. (Includes Transmitter Mount Small and Items 7 and 8)	1
	• *N.L.A.*	• Transmitter Mount Small	1
7	• *N.L.A.*	• Transmitter Tube	1
8	• *N.L.A.*	• Sound Tube	1
9	015-0472-00	Cable Tie	2
10	042-0048-02	Clevis Pin	1
11	042-0014-05	Shoulder Screw (Apply Loctite #042-0025-00)	2
12	016-0131-04	Flange Bearing	2
13	030-0713-01	Back Weldment	1
14	015-0312-00	Terminal	3
15		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref
16	015-0001-00	Wire Clip	1
17	040-0010-47	Screw	1
18	054-0085-04	Sound Damp	4
19	040-0375-26	Screw	4
20	051-0377-00	Siderail (18" [Standard])	2
	051-0377-02	Siderail (12" [Special])	2
21	042-0001-02	Roll Pin	2

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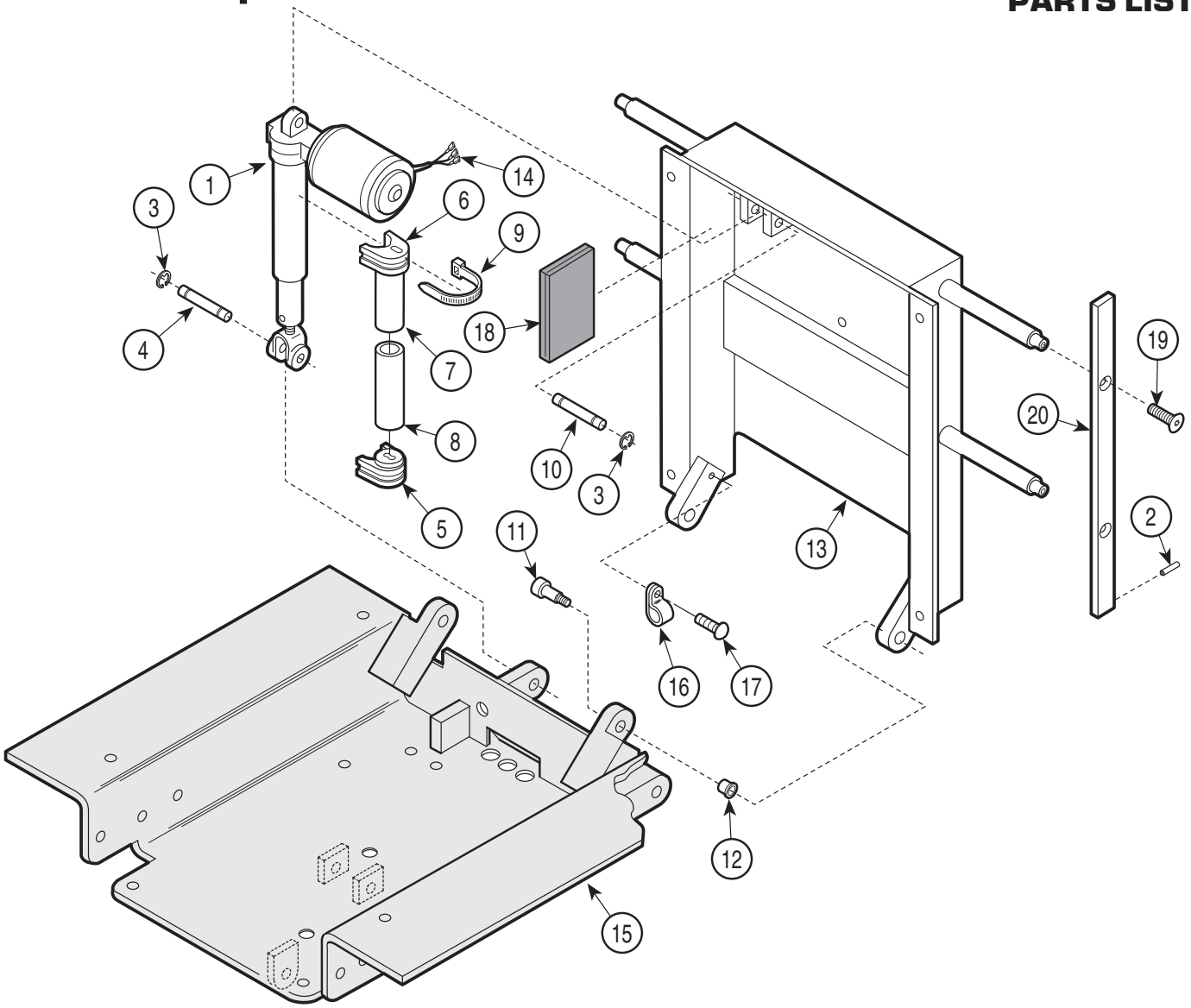
Back Components



MA258402

Used on units with Serial Number AV-8715 and DJ-1221 thru Present

Item	Part No.	Description	Qty.
1	002-0590-00	Actuator Assembly - Domestic	1
	002-0590-01	Actuator Assembly - Export	1
2	042-0001-02	Roll Pin	2
3	042-0007-02	E-Ring	4
4	042-0048-01	Clevis Pin	1
5	• *N.L.A.*	• Transmitter Mount Small	1
6	*N.L.A.*	Transmitter Assy. (Includes Transmitter Mount Small and Items 7 and 8)	1
	• *N.L.A.*	• Transmitter Mount Small	1
7	• *N.L.A.*	• Transmitter Tube	1
8	• *N.L.A.*	• Sound Tube	1
9	015-0472-00	Cable Tie	2
10	042-0048-02	Clevis Pin	1
11	042-0014-05	Shoulder Screw (Apply Loctite #042-0025-00)	2
12	016-0131-04	Flange Bearing	2
13	030-0713-01	Back Weldment	1
14	015-0312-00	Terminal	3
15		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref
16	015-0001-00	Wire Clip	1
17	040-0010-47	Screw	1
18	054-0085-04	Sound Damp	4
19	040-0375-26	Screw	4
20	051-0377-00	Siderail (18" [Standard])	2
	051-0377-02	Siderail (12" [Special])	2

N.L.A. Denotes "No Longer Available"
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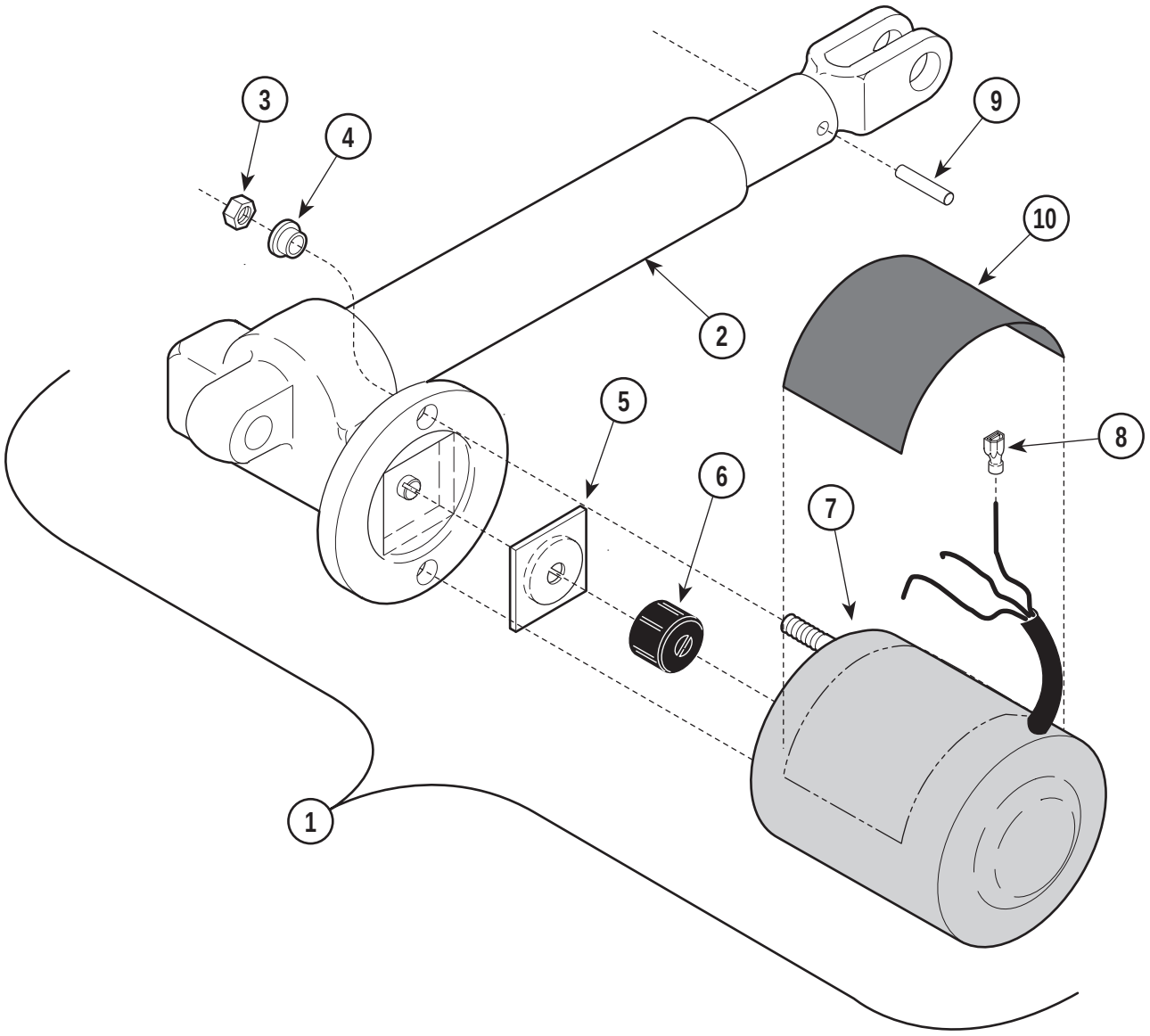
Back and Foot Actuator Assembly



MA294800

Used on units with Serial Number AV-1000 thru AV-8714, DJ-1000 thru DJ-1220, and DW-1000

Item	Part No.	Description	Qty.
1	002-0215-00	Actuator Assembly - Domestic (Includes Items 2 thru 8)	1
	Not Available	Actuator Assembly - Export (Includes Items 2 thru 8)	1
2	• 016-0233-04	• Actuator (Less Motor)	1
3	•	• Nut	2
4	• 053-0198-00	• Shoulder Washer	2
5	• 016-0237-00	• Actuator Brake	1
6	• 016-0509-00	• Motor Coupler	1
7	• 002-0574-00	• Motor - Domestic (Less Terminals)	1
	• 002-0574-02	• Motor - Export (Less Terminals)	1
8	• 015-0312-00	• Terminal	3
9	042-0001-14	Roll Pin	1
10	061-0135-00	Caution Label	1

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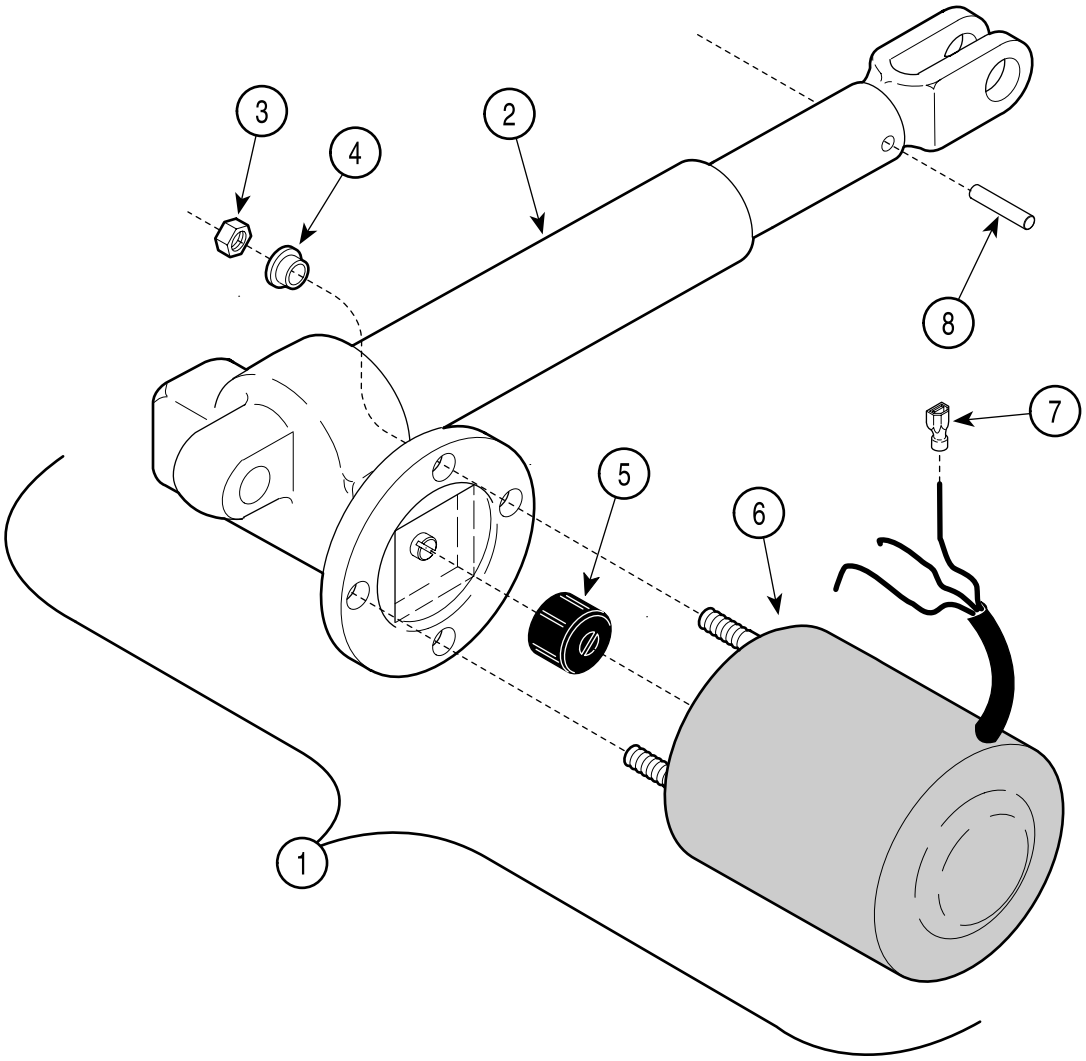
Back and Foot Actuator Assembly



MA245101

Used on units with Serial Number AV-8715, DJ-1221 and DW-1001 thru Present

Item	Part No.	Description	Qty.
1	002-0590-00	Actuator Assembly - 120 VAC (Includes Items 2 thru 8)	1
	002-0590-01	Actuator Assembly - 230 VAC (Includes Items 2 thru 8)	1
2	•	• Actuator (Less Motor)	1
3	•	• Nut	4
4	• 053-0198-00	• Shoulder Washer	4
5	• 016-0662-00	• Motor Coupler	1
6	• 015-1085-00	• Motor - 120 VAC (Less Terminals)	1
	• 015-1085-02	• Motor - 230 VAC (Less Terminals)	1
7	• 015-0315-15	• Terminal	3
8	• 042-0001-14	• Roll Pin	1

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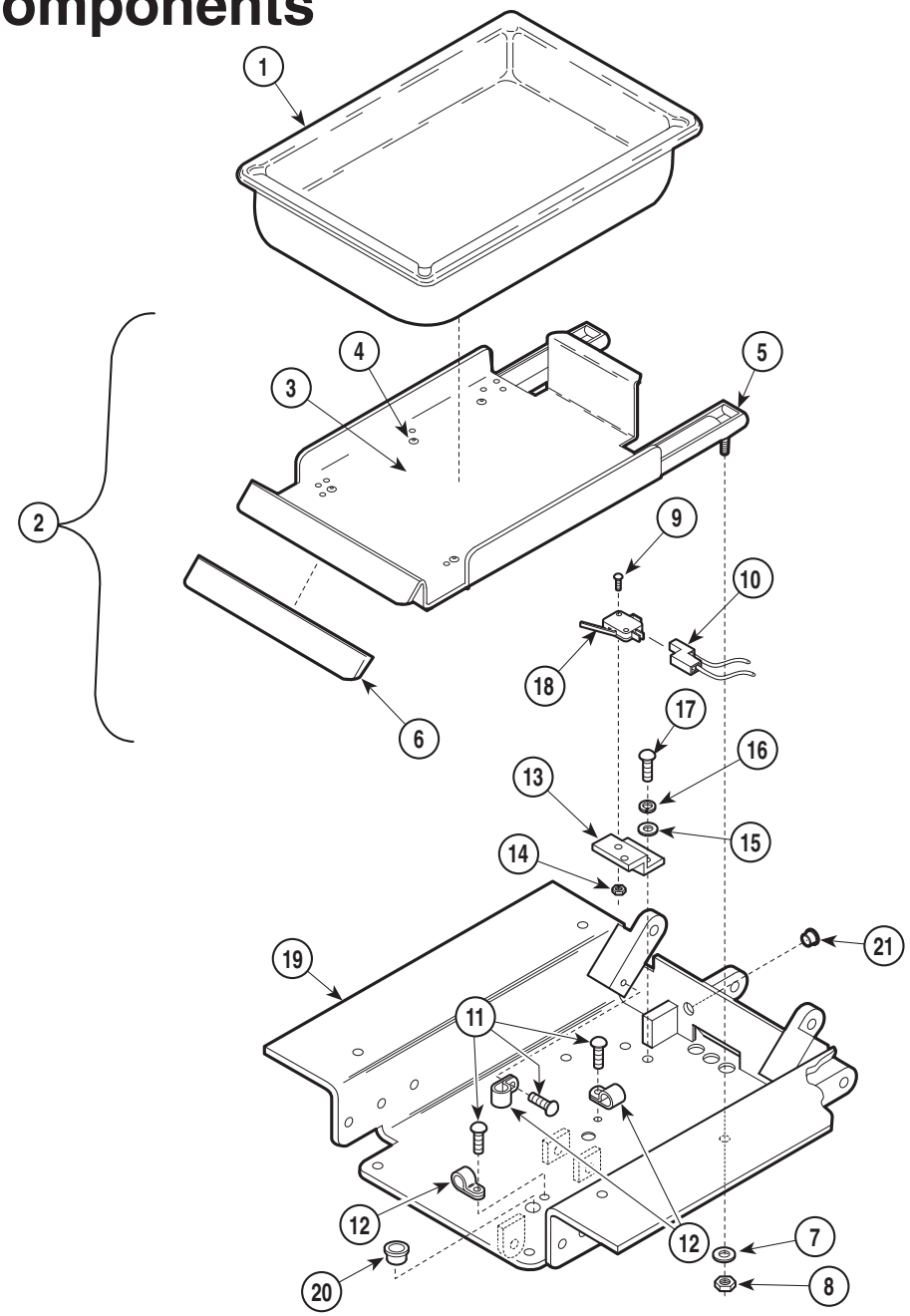
Seat Components



MA258501

Used on units with Serial Number AV-1000 thru AV-3365

Item	Part No.	Description	Qty.
1	016-0373-00	Treatment Pan	1
2	029-0556-00	Pan Holder Assembly (Includes Items 3 thru 6)	1
3	• 050-1784-00	• Pan Holder	1
4	• 042-0010-03	• Pop Rivet	6
5	• *N.L.A.*	• Pan Slide	2
6	• 053-0349-01	• Pan Holder Cover (Apply Loctite #042-0076-00)	1
7	045-0001-39	Washer	4
8	041-0008-02	Nut	4
9	040-0004-09	Screw	2
10		Wire Connector (Refer to "Wiring Diagram" Elsewhere [Section 5])	Ref
11	040-0010-47	Screw	3
12	015-0001-00	Wire Clip	3
13	050-1127-00	Switch Bracket	1
14	041-0004-01	Nut	2
15	045-0001-15	Washer	2
16	045-0001-04	Lockwasher	2
17	040-0010-47	Screw	2
18	015-0425-00	Switch	1
19	030-0613-00	Seat Weldment	1
20	053-0068-08	Snap Bushing	3
21	053-0068-10	Snap Bushing	1

N.L.A. Denotes "No Longer Available"

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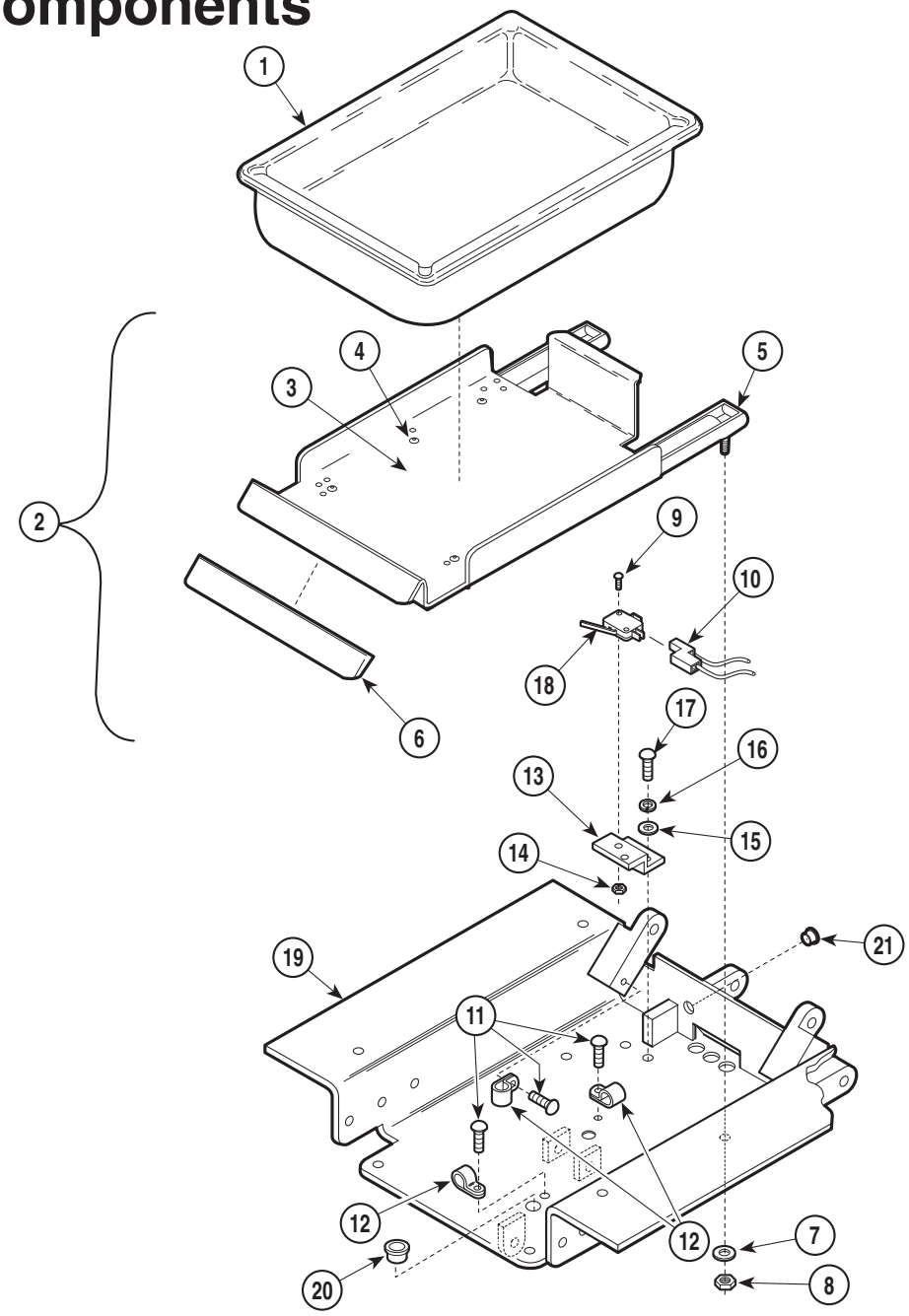
Seat Components



MA258501

Used on units with Serial Number AV-3366 thru AV-4456 and DJ-1000 thru DJ-1018

Item	Part No.	Description	Qty.
1	016-0373-00	Treatment Pan	1
2	029-0556-00	Pan Holder Assembly (Includes Items 3 thru 6)	1
3	• 050-1784-00	• Pan Holder	1
4	• 042-0010-03	• Pop Rivet	6
5	• *N.L.A.*	• Pan Slide	2
6	• 053-0349-01	• Pan Holder Cover (Apply Loctite #042-0076-00)	1
7	045-0001-39	Washer	4
8	041-0008-02	Nut	4
9	040-0004-09	Screw	2
10		Wire Connector (Refer to "Wiring Diagram" Elsewhere [Section 5])	Ref
11	040-0010-47	Screw	3
12	015-0001-00	Wire Clip	3
13	050-1127-00	Switch Bracket	1
14	041-0004-01	Nut	2
15	045-0001-15	Washer	2
16	045-0001-04	Lockwasher	2
17	040-0010-47	Screw	2
18	015-0425-00	Switch	1
19	030-0714-00	Seat Weldment	1
20	053-0068-08	Snap Bushing	3
21	053-0068-10	Snap Bushing	1

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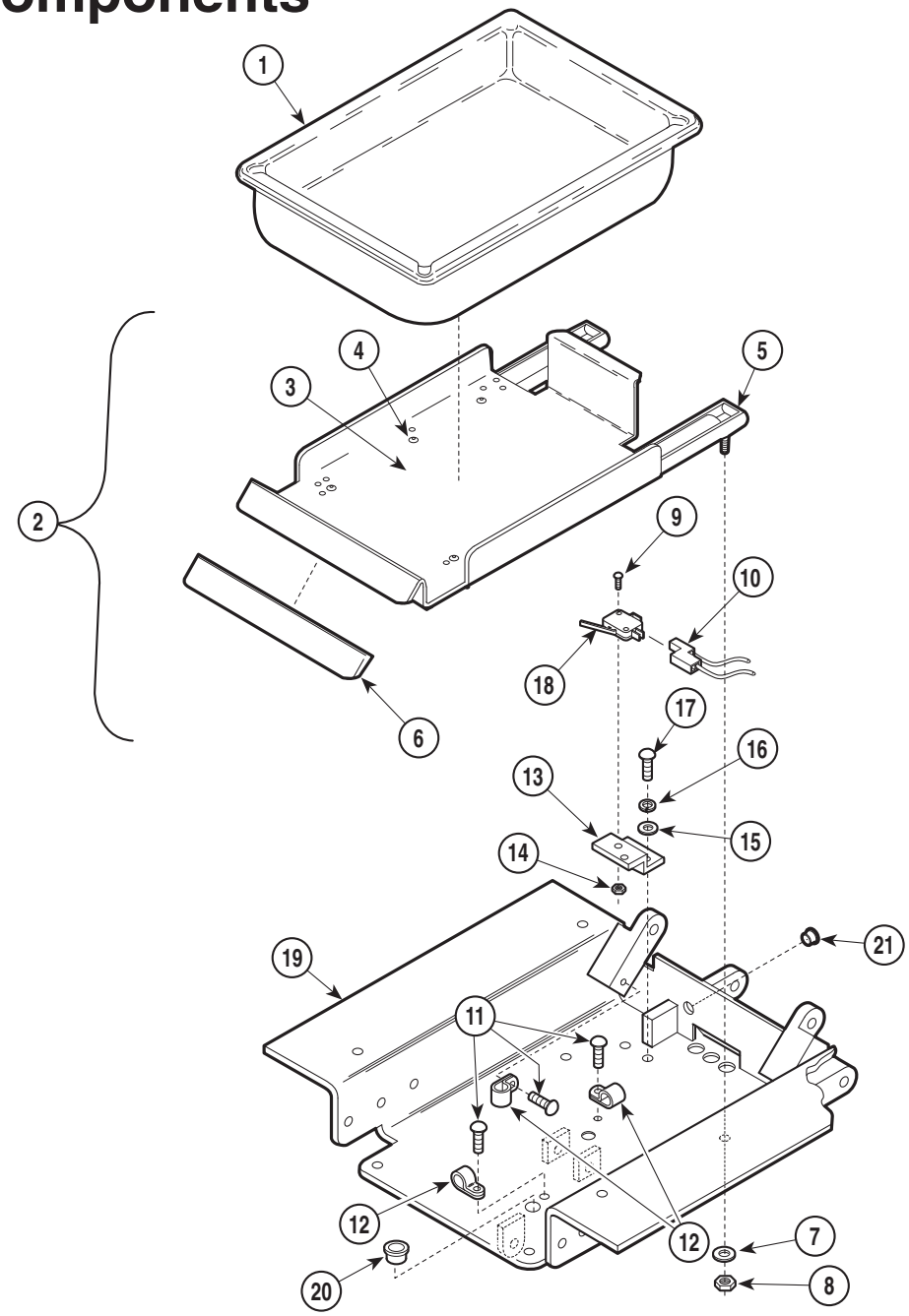
Seat Components



MA258501

Used on units with Serial Number AV-4457 and DJ-1019 thru Present

Item	Part No.	Description	Qty.
1	016-0373-00	Treatment Pan	1
2	029-0556-00	Pan Holder Assembly (Includes Items 3 thru 6)	1
3	• 050-1784-00	• Pan Holder	1
4	• 042-0010-03	• Pop Rivet	6
5	• *N.L.A.*	• Pan Slide	2
6	• 053-0349-01	• Pan Holder Cover (Apply Loctite #042-0076-00)	1
7	045-0001-39	Washer	4
8	041-0008-02	Nut	4
9	040-0004-09	Screw	2
10		Wire Connector (Refer to "Wiring Diagram" Elsewhere [Section 5])	Ref
11	040-0010-47	Screw	3
12	015-0001-00	Wire Clip	3
13	050-1127-00	Switch Bracket	1
14	041-0004-01	Nut	2
15	045-0001-15	Washer	2
16	045-0001-04	Lockwasher	2
17	040-0010-47	Screw	2
18	015-0425-00	Switch	1
19	030-0714-01	Seat Weldment	1
20	053-0068-08	Snap Bushing	3
21	053-0068-10	Snap Bushing	1

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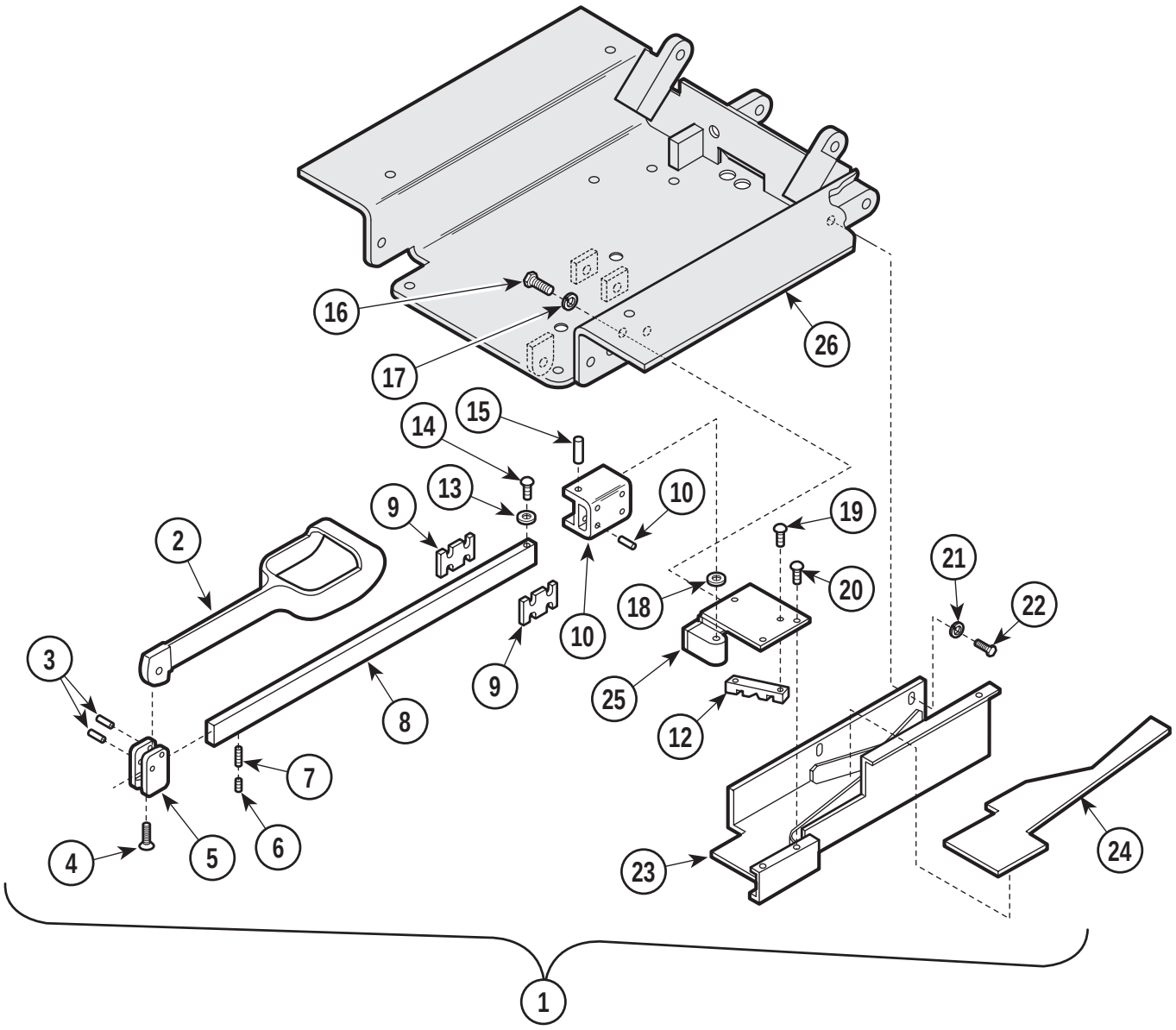
Stirrup Assembly



MA258201

Used on units with Serial Number AV-1000 thru AV-1429

Item	Part No.	Description	Qty.
1	029-0579-00	Stirrup and Bracket Assy. - R.H. (Includes Items 2 thru 25 [Not Shown])	1
	029-0579-01	Stirrup and Bracket Assy. - L.H. (Includes Items 2 thru 25 [Shown])	1
2	• 020-0001-01	• Stirrup	1
3	• 042-0001-00	• Roll Pin	2
4	• 040-0250-33	• Screw	1
5	• 051-0417-00	• Pivot Block	1
6	• 040-0250-15	• Set Screw	1
7	• 040-0250-26	• Set Screw	1
8	• 015-0394-00	• Stirrup Bar	1
9	• 053-0228-00	• Stirrup Spacer	2
10	• 021-0014-00	• Pivot Block	1
11	• 042-0001-12	• Roll Pin	3
12	• 051-0401-00	• Guide	1
13	• 053-0081-00	• Nylon Stop	2
14	• 040-0250-01	• Screw	1
15	• 042-0001-13	• Roll Pin	1
16	• 040-0375-20	• Screw	3
17	• 045-0001-24	• Lockwasher	3
18	• 045-0007-02	• Washer Bearing	1
19	• 040-0012-28	• Screw	2
20	• 040-0010-62	• Screw	2
21	• 045-0001-23	• Lockwasher	2
22	• 040-0250-10	• Screw	2
23	• 030-0437-00	• Stirrup Weldment - R.H. (Not Shown)	1
	• 030-0437-01	• Stirrup Weldment - L.H. (Shown)	1
24	• 053-0278-00	• Stirrup Insert - R.H. (Not Shown)	1
	• 053-0278-01	• Stirrup Insert - L.H. (Shown)	1
25	• 030-0430-00	• Mount Weldment - R.H. (Not Shown)	1
	• 030-0430-01	• Mount Weldment - L.H. (Shown)	1
26		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref

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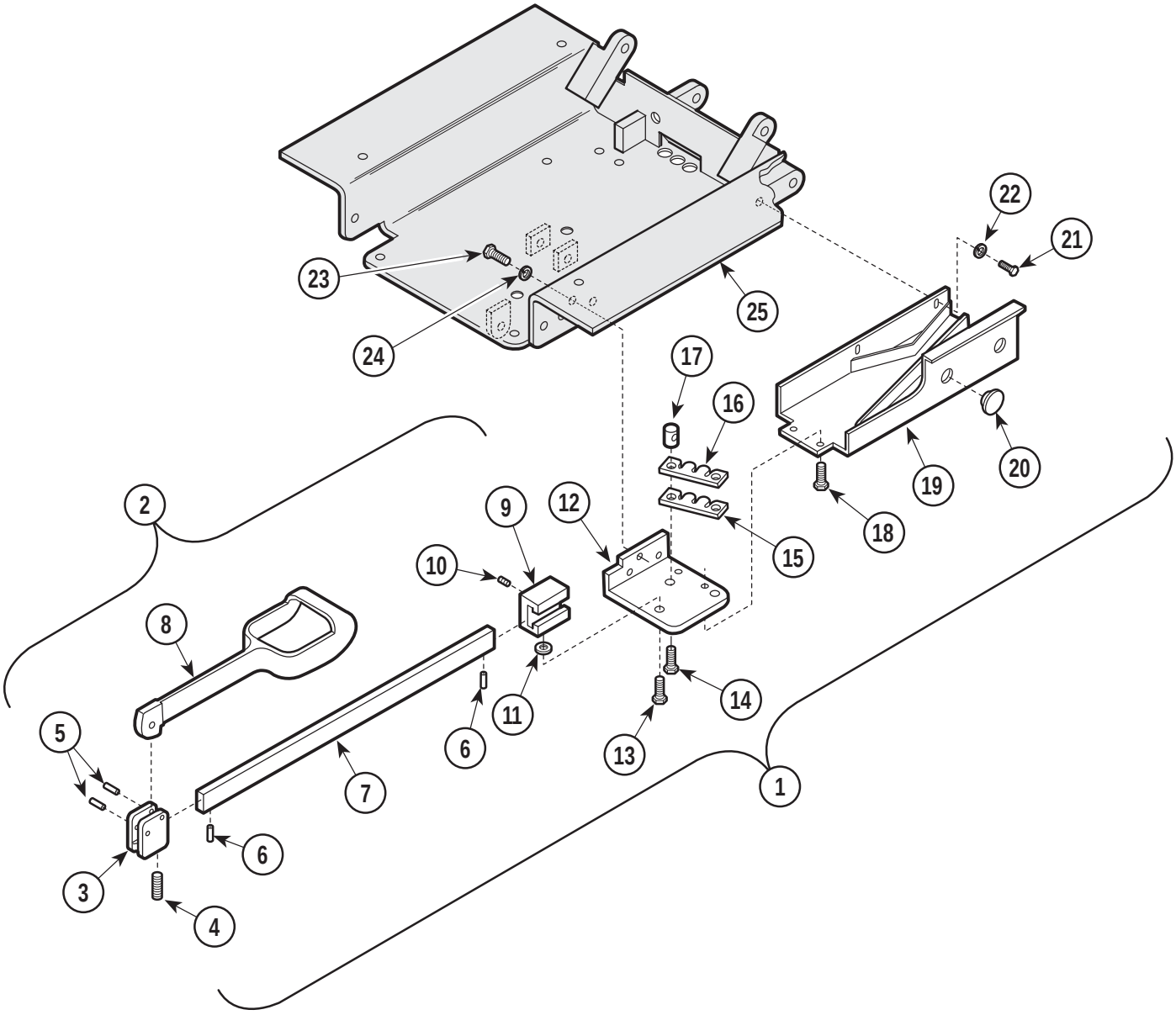
Stirrup Assembly



MA258301

Used on units with Serial Number AV-1430 thru AV-3717

Item	Part No.	Description	Qty.
1	029-0669-00	Stirrup and Bracket Assy. - R.H. (Includes Items 2 thru 24 [Not Shown])	1
	029-0669-01	Stirrup and Bracket Assy. - L.H. (Includes Items 2 thru 24 [Shown])	1
2	• ~~029-0115-00~~	• (No Longer Available) - R.H. (Includes Items 3 thru 9 [Shown])	1
	• ~~029-0115-01~~	• (No Longer Available) - L.H. (Includes Items 3 thru 9 [Not Shown])	1
3	• • 020-0012-00	• • Pivot Block	1
4	• • 040-0250-15	• • Set Screw	1
5	• • 042-0001-00	• • Roll Pin	2
6	• • 042-0001-02	• • Roll Pin	2
7	• • 051-0005-00	• • Horizontal Bar	1
8	• • 020-0001-01	• • Stirrup	1
9	• • 051-0113-00	• • Steel Pivot Block	1
10	• 040-0010-14	• Set Screw	2
11	• 025-0013-00	• Wave Spring Washer	3
12	• 030-0511-00	• Stirrup Mount - R.H. (Not Shown)	1
	• 030-0511-01	• Stirrup Mount - L.H. (Shown)	1
13	• 042-0014-00	• Shoulder Screw	1
14	• 040-0312-03	• Screw	2
15	• 053-0286-00	• Gear Lock Pad	1
16	• 050-1417-00	• Gear Lock	1
17	• 057-0049-00	• Stirrup Stop	1
18	• 040-0010-34	• Screw	2
19	• 030-0512-00	• Guide Weldment - R.H. (Not Shown)	1
	• 030-0512-01	• Guide Weldment - L.H. (Shown)	1
20	• 053-0050-02	• Plug	2
21	• 040-0250-10	• Screw	2
22	• 045-0001-23	• Lockwasher	2
23	• 040-0375-20	• Screw	3
24	• 045-0001-24	• Lockwasher	3
25		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref

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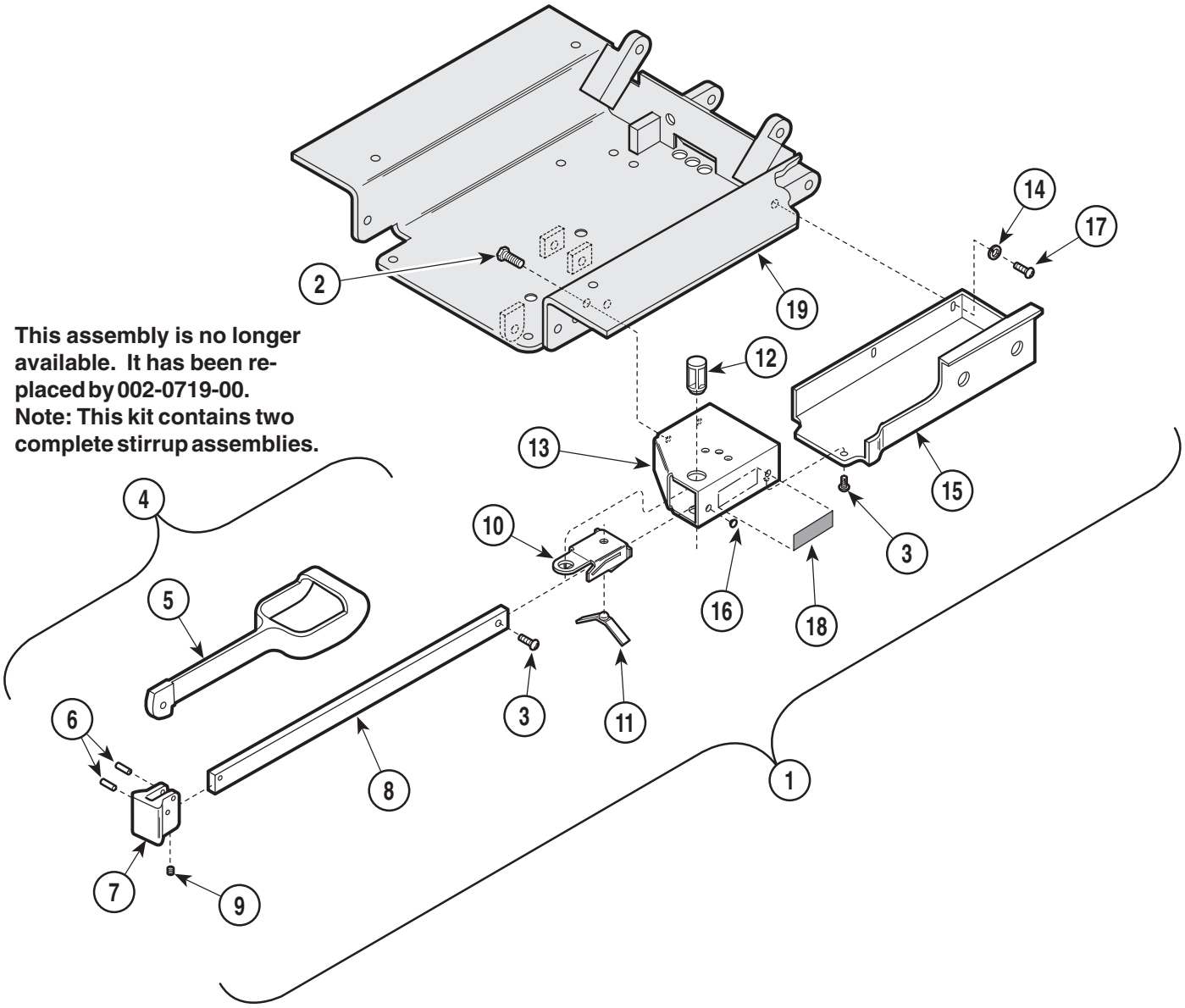
Stirrup Assembly



MA258302

Used on units with Serial Number AV-3718 thru AV-4087 and DJ-1000 thru DJ-1002

Item	Part No.	Description	Qty.
1	029-1281-00	Stirrup and Bracket Assy. - R.H. (Includes Items 2 thru 17 [Not Shown])	1
	029-1281-01	Stirrup and Bracket Assy. - L.H. (Includes Items 2 thru 17 [Shown])	1
2	• 040-0375-00	Screw	2
3	• 040-0010-34	Screw	2
4	• 029-1277-00	Stirrup Assembly (Incl. Items 5 thru 9)	2
5	• • 020-0181-00	• • Stirrup	1
6	• • 042-0001-00	• • Roll Pin	2
7	• • 020-0182-00	• • Pivot Block	1
8	• • 051-0634-00	• • Horizontal Bar	1
9	• • 040-0250-15	• • Set Screw	1
10	• 050-1785-00	• Bracket	1
11	• 016-0400-00	• Spring	1
12	• 053-0387-00	• Pivot Boss	1
13	• 030-0725-00	• Stirrup Mount - R.H. (Not Shown)	1
	• 030-0726-00	• Stirrup Mount - L.H. (Shown)	1
14	• 045-0001-23	• Washer	2
15	• 053-0381-00	• Stirrup Housing R.H. (Not Shown)	1
	• 053-0381-01	• Stirrup Housing L.H. (Shown)	1
16	• 053-0050-05	• Plug	2
17	• 040-0250-48	• Screw	2
18	061-0296-00	Stirrup Instruction Label	2
19		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref

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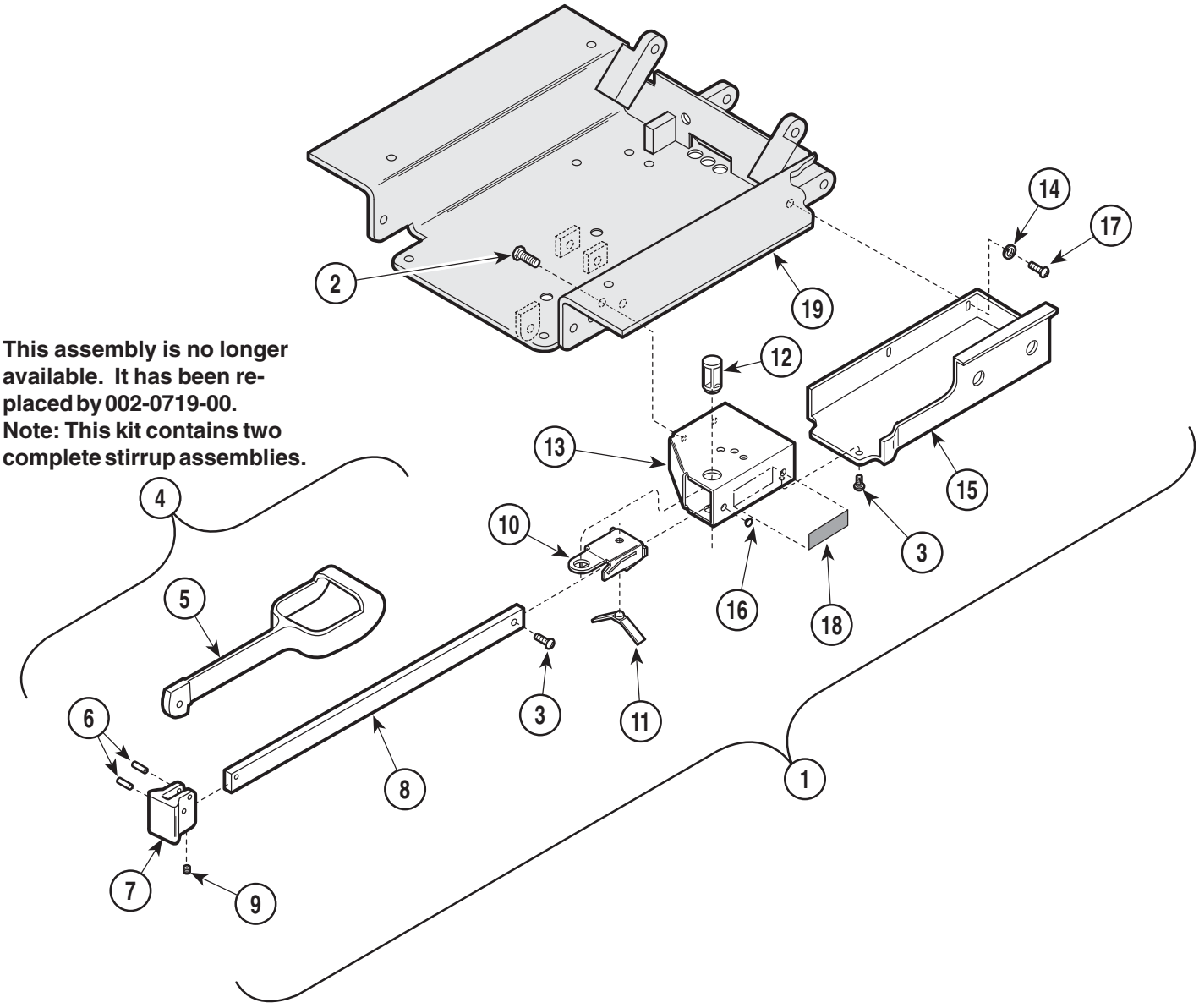
Stirrup Assembly

This assembly is no longer available. It has been replaced by 002-0719-00. Note: This kit contains two complete stirrup assemblies.



MA258302

Used on units with Serial Number AV-4088 and DJ-1003 thru Present

Item	Part No.	Description	Qty.
1	029-1460-00	Stirrup and Bracket Assy. - R.H. (Includes Items 2 thru 17 [Not Shown])	1
	029-1460-01	Stirrup and Bracket Assy. - L.H. (Includes Items 2 thru 17 [Shown])	1
2	• 040-0375-00	Screw	2
3	• 040-0010-47	Screw	2
4	• 029-1397-00	Stirrup Assembly (Incl. Items 5 thru 9)	2
5	• • 020-0181-00	• • Stirrup	1
6	• • 042-0001-00	• • Roll Pin	2
7	• • 020-0182-00	• • Pivot Block	1
8	• • 051-0668-00	• • Horizontal Bar	1
9	• • 040-0250-15	• • Set Screw	1
10	• 050-5027-00	• Bracket	1
11	• 016-0400-00	• Spring	1
12	• 053-0387-00	• Pivot Boss	1
13	• 030-0725-00	• Stirrup Mount - R.H. (Not Shown)	1
	• 030-0726-00	• Stirrup Mount - L.H. (Shown)	1
14	• 045-0001-23	• Washer	2
15	• 053-0381-00	• Stirrup Housing R.H. (Not Shown)	1
	• 053-0381-01	• Stirrup Housing L.H. (Shown)	1
16	• 053-0050-05	• Plug	2
17	• 040-0250-48	• Screw	2
18	061-0296-00	Stirrup Instruction Label	2
19		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref

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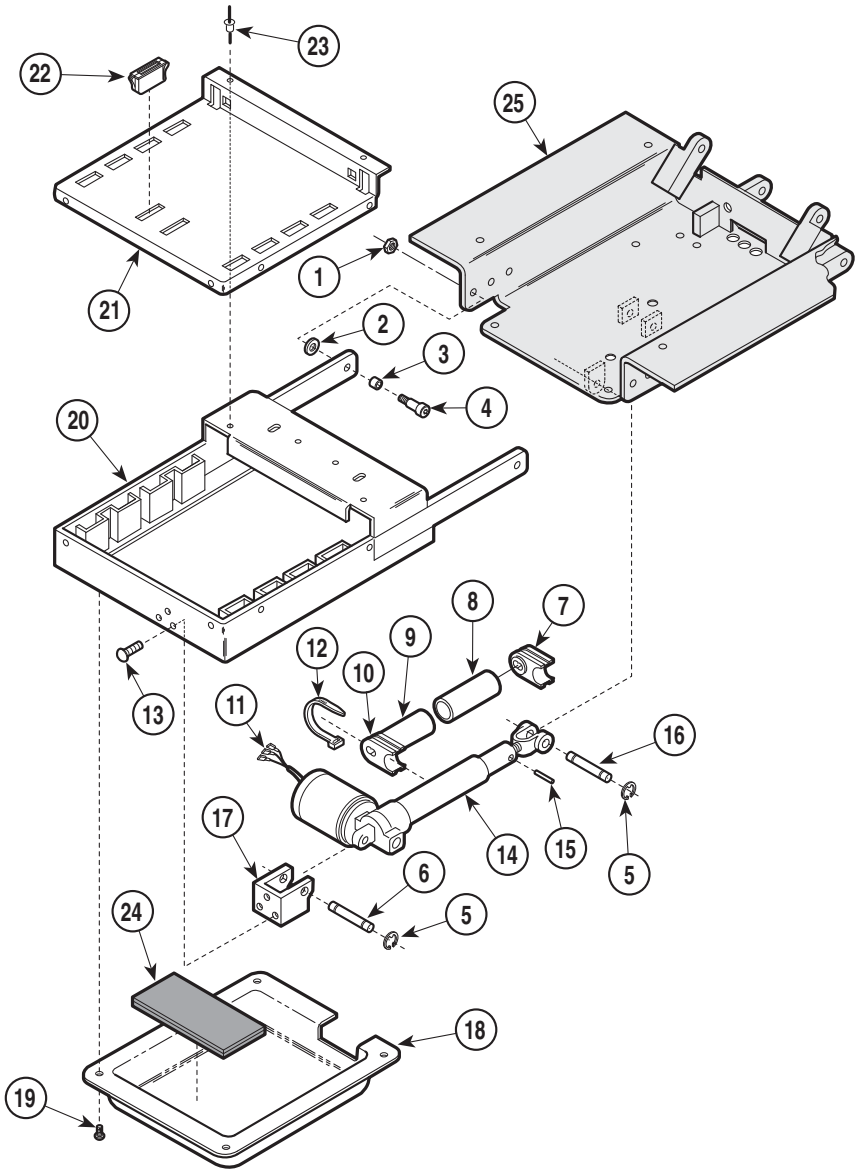
Foot Extension Components



MA257901

Used on units with Serial Number AV1000 thru AV8593, DJ1000 thru DJ1173 and DW1000

Item	Part No.	Description	Qty.
1	041-0375-05	Nut	2
2	045-0004-00	Washer	2
3	016-0076-00	Bushing	2
4	042-0014-00	Shoulder Screw	2
5	042-0007-02	E-Ring	4
6	042-0048-02	Clevis Pin	1
7	*N.L.A.*	Transmitter Mount Small	1
8	*N.L.A.*	Transmitter Assy. (Includes Sound Tube and Items 9 and 10)	1
	• *N.L.A.*	• Sound Tube	1
9	• *N.L.A.*	• Transmitter Tube	1
10	• *N.L.A.*	• Transmitter Mount Small	1
11	015-0312-00	Terminal	3
12	015-0472-00	Cable Tie	2
13	040-0250-42	Screw	3
14		Foot Actuator (Refer to "Back and Foot Actuator Assembly" Elsewhere)	Ref
15	042-0001-07	Roll Pin	1
16	042-0048-01	Clevis Pin	1
17	*N.L.A.*	Actuator Hitch	1
18	~~053-0241-00~~	Plastic Foot Cover	1
19	040-0010-47	Screw	4
20	030-0447-01	Foot Extension	1
21	050-1236-00	Front Trim	1
22	016-0092-00	Magnet	2
23	042-0010-04	Pop Rivet	8
24	054-0085-05	Sound Damp	1
25		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref

N.L.A. Denotes "No Longer Available"
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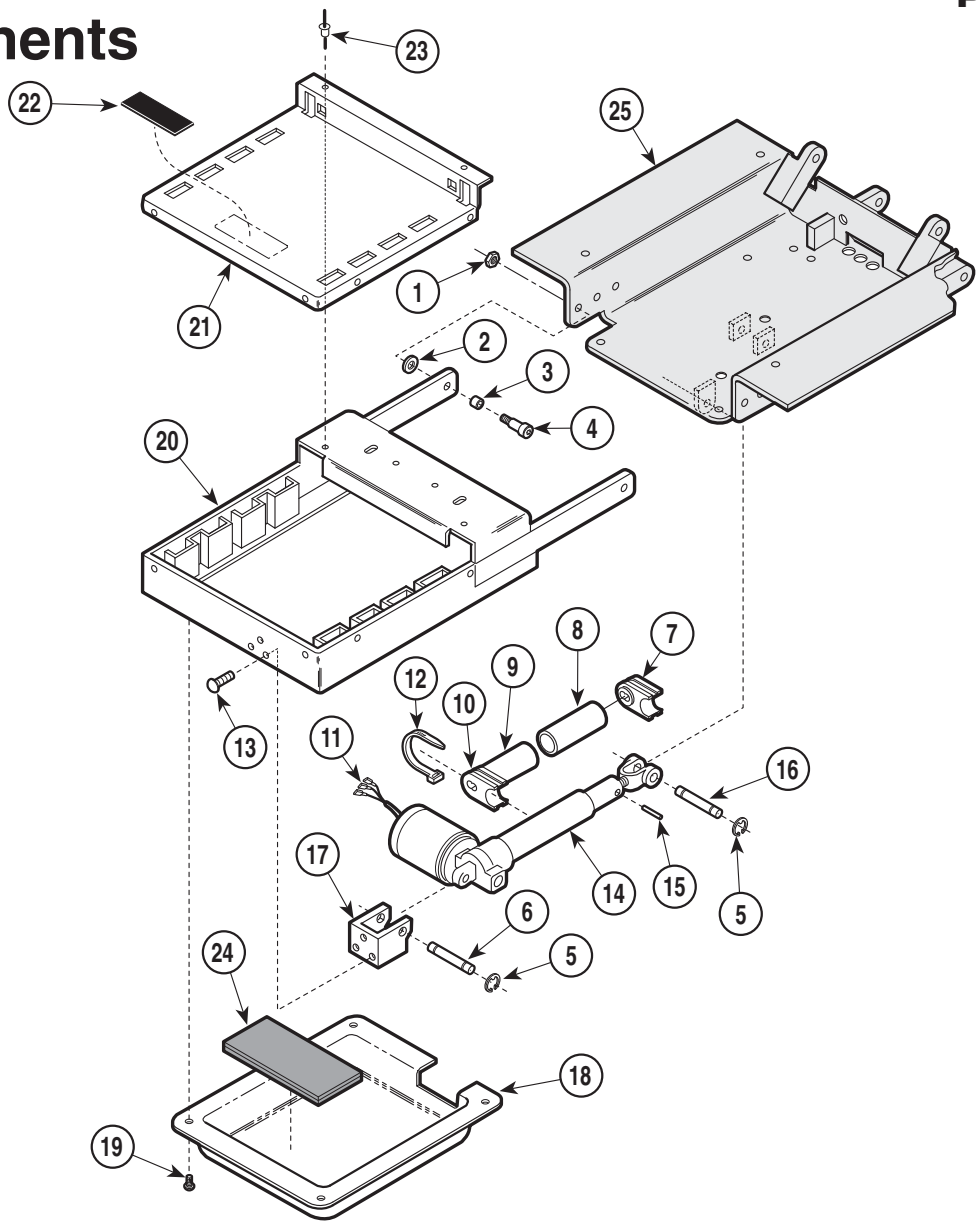
Foot Extension Components



MA257902

Used on units with Serial Number AV8594 thru AV8714, and DJ1174 thru DJ1220

Item	Part No.	Description	Qty.
1	041-0375-05	Nut	2
2	045-0004-00	Washer	2
3	016-0076-00	Bushing	2
4	042-0014-00	Shoulder Screw	2
5	042-0007-02	E-Ring	4
6	042-0048-02	Clevis Pin	1
7	*N.L.A.*	Transmitter Mount Small	1
8	*N.L.A.*	Transmitter Assy. (Includes Sound Tube and Items 9 and 10)	1
	• *N.L.A.*	• Sound Tube	1
9	• *N.L.A.*	• Transmitter Tube	1
10	• *N.L.A.*	• Transmitter Mount Small	1
11	015-0312-00	Terminal	3
12	015-0472-00	Cable Tie	2
13	040-0250-42	Screw	3
14		Foot Actuator (Refer to "Back and Foot Actuator Assembly" Elsewhere)	Ref
15	042-0001-07	Roll Pin	1
16	042-0048-01	Clevis Pin	1
17	*N.L.A.*	Actuator Hitch	1
18	~~053-0241-00~~	Plastic Foot Cover	1
19	040-0010-47	Screw	4
20	030-0447-01	Foot Extension	1
21	050-4128-00	Front Trim	1
22	016-0406-01	Magnet	2
23	042-0010-04	Pop Rivet	8
24	054-0085-05	Sound Damp	1
25		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref

N.L.A. Denotes "No Longer Available"

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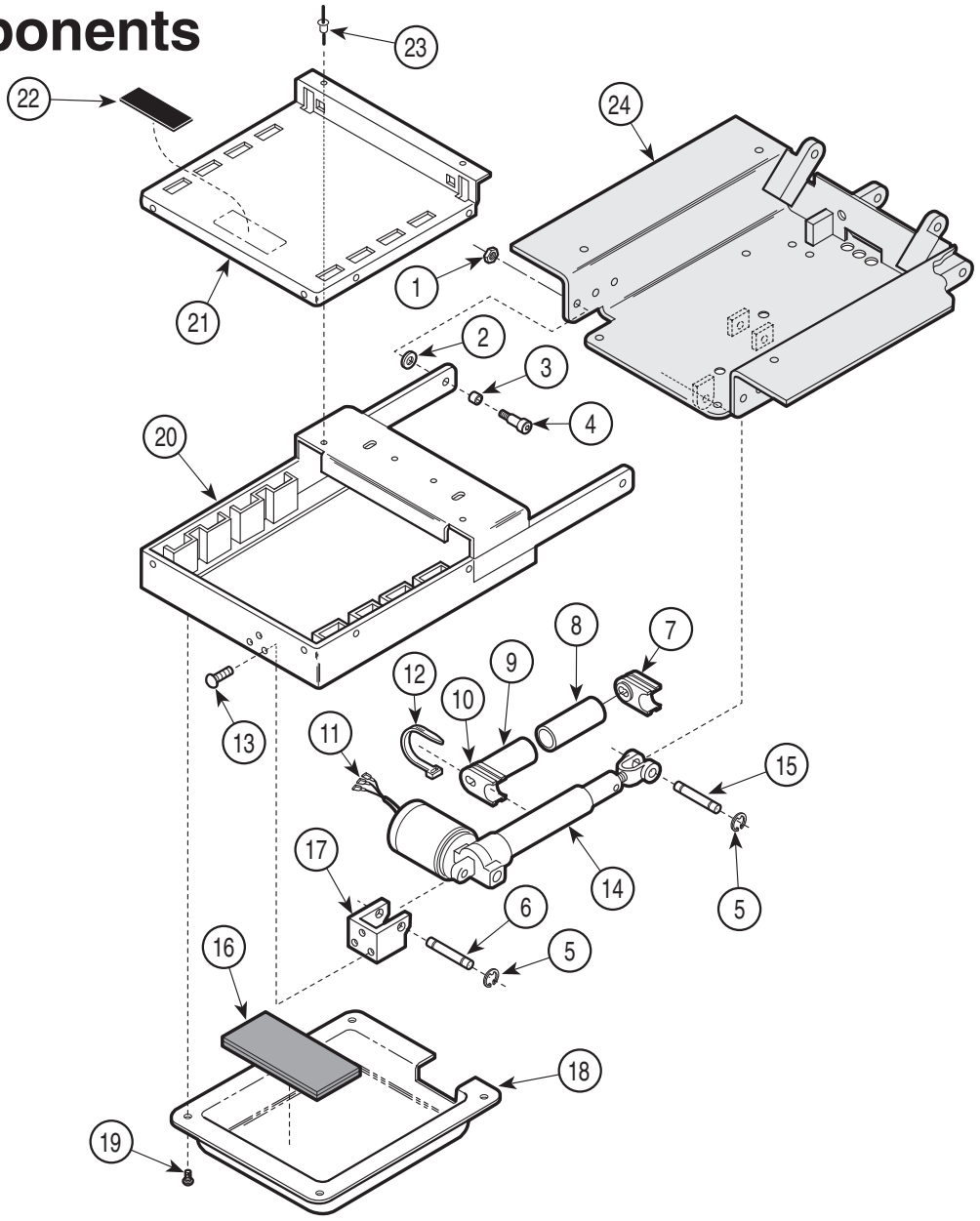
Foot Extension Components



MA257903

Used on units with Serial Number AV8715, DJ1221 and DW1001 thru Present

Item	Part No.	Description	Qty.
1	041-0375-05	Nut	2
2	045-0004-00	Washer	2
3	016-0076-00	Bushing	2
4	042-0014-00	Shoulder Screw	2
5	042-0007-02	E-Ring	4
6	042-0048-02	Clevis Pin	1
7	*N.L.A.*	Transmitter Mount Small	1
8	*N.L.A.*	Transmitter Assy. (Includes Sound Tube and Items 9 and 10)	1
	• *N.L.A.*	• Sound Tube	1
9	• *N.L.A.*	• Transmitter Tube	1
10	• *N.L.A.*	• Transmitter Mount Small	1
11	015-0312-00	Terminal	3
12	015-0472-00	Cable Tie	2
13	040-0250-42	Screw	3
14	002-0590-00	Actuator Assembly - Domestic	1
	002-0590-01	Actuator Assembly - Export	1
15	042-0048-01	Clevis Pin	1
16	054-0085-05	Sound Damp	1
17	*N.L.A.*	Actuator Hitch	1
18	~~053-0241-00~~	Plastic Foot Cover	1
19	040-0010-47	Screw	4
20	030-0447-01	Foot Extension	1
21	050-4128-00	Front Trim	1
22	016-0406-01	Magnet	2
23	042-0010-04	Pop Rivet	8
24		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref

N.L.A. Denotes "No Longer Available"

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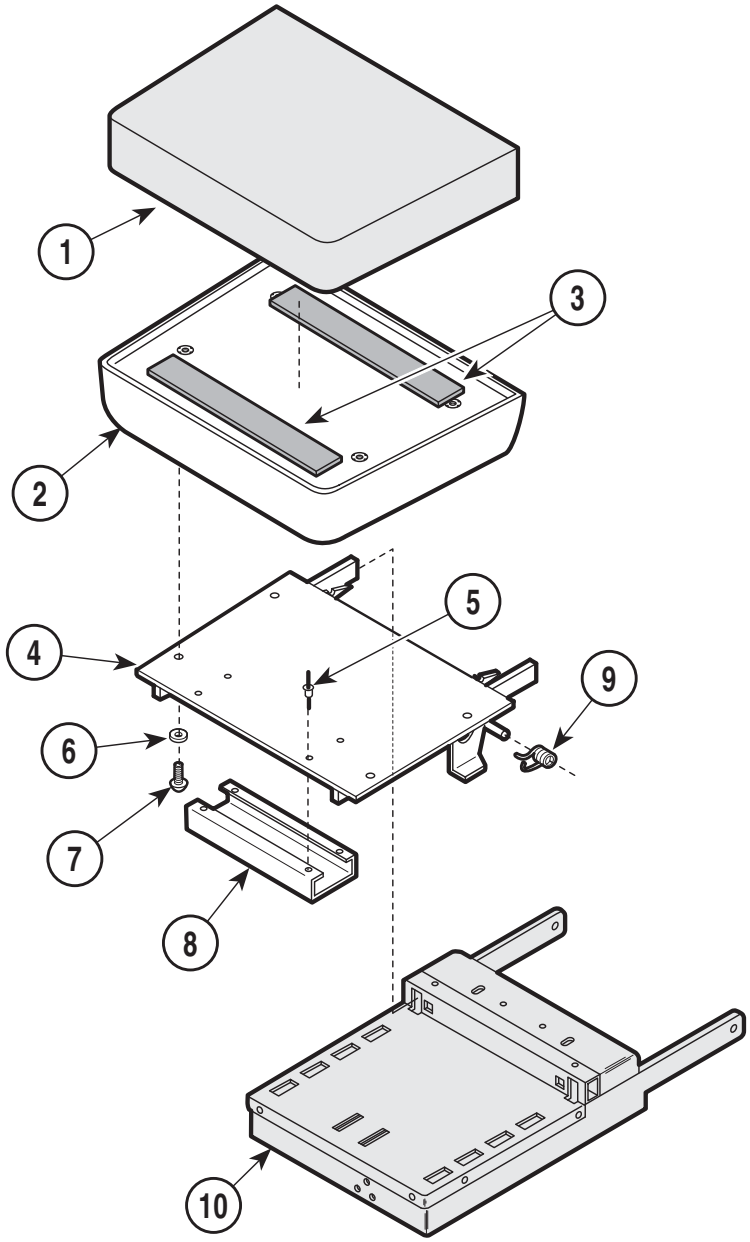
Footboard Components



MA258601

Item	Part No.	Description	Qty.
1		Upholstered Footboard (Refer to "Upholstered Components" Elsewhere)	Ref
2	029-0585-00	Footboard Assembly	1
3	053-0131-02	Velcro	2
4	~~030-0836-10~~	(No Longer Available)	1
5	042-0010-04	Pop Rivet	4
6	045-0001-03	Lockwasher	4
7	040-0250-44	Screw	4
8	050-0868-00	Catch Channel	1
9	~~025-0014-00~~	Torsion Spring (Shown)	1
	~~025-0014-01~~	Torsion Spring	1
10		Foot Extension (Refer to "Foot Extension Components" Elsewhere)	Ref

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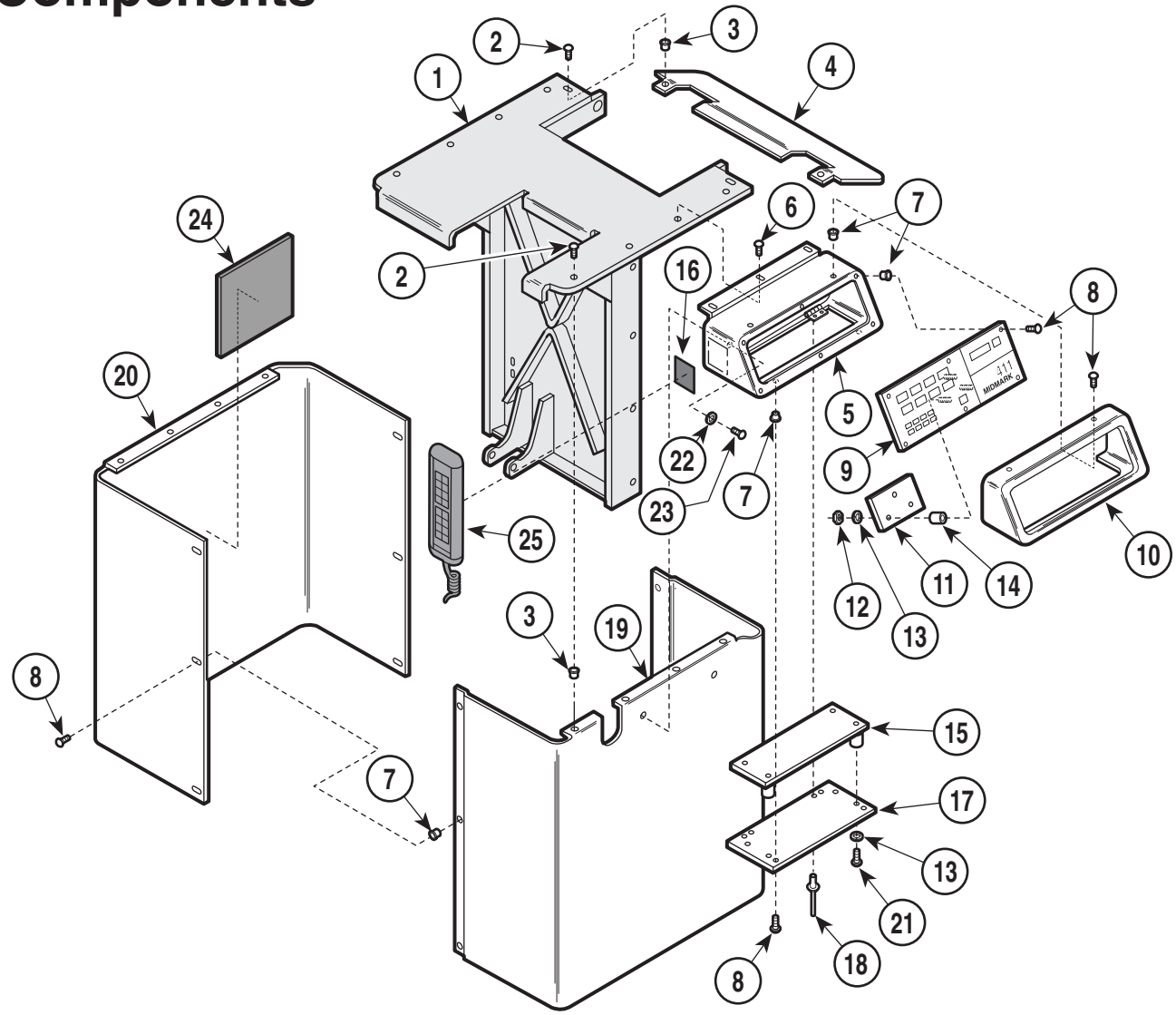
Covers and Control Components



MA257701

Used on units with Serial Number AV-1000 thru AV-2888

Item	Part No.	Description	Qty.
1		Inner Member Wldnt. (Refer to "Middle Member Components" Elsewhere)	Ref
2	040-0010-01	Screw	6
3	042-0045-01	Nutsert	6
4	050-1697-10	Sprocket Shroud	1
5	030-0747-10	Console Weldment	1
6	040-0010-04	Screw	2
7	042-0045-02	Nutsert	18
8	040-0008-29	Screw	18
9	*N.L.A.*	Program Panel	1
10	053-0218-00	Bezel	1
11	002-0347-03	Program Panel Interface Board Kit	1
12	041-0006-03	Nut	7
13	045-0001-45	Lockwasher	7
14	016-0148-01	Spacer	3
15	002-0347-00	P.C. Logic Board Kit	1
16	053-0105-13	Velcro	1
17	050-1142-00	Console Cover	1
18	042-0010-00	Pop Rivet	4
19	050-1140-00	Shroud L.H. w/Notch Out (Shown)	1
	050-1140-01	Shroud L.H. (Not Shown)	1
20	050-1141-01	Shroud R.H. (Shown)	1
	050-1141-00	Shroud R.H. w/Notch Out (Not Shown)	1
21	040-0006-42	Screw	4
22	045-0001-18	Lockwasher	2
23	040-0010-47	Screw	4
24	054-0067-00	Sound Damp	2
25		Hand Control (Refer to "Hand Control Assembly" Elsewhere)	Ref

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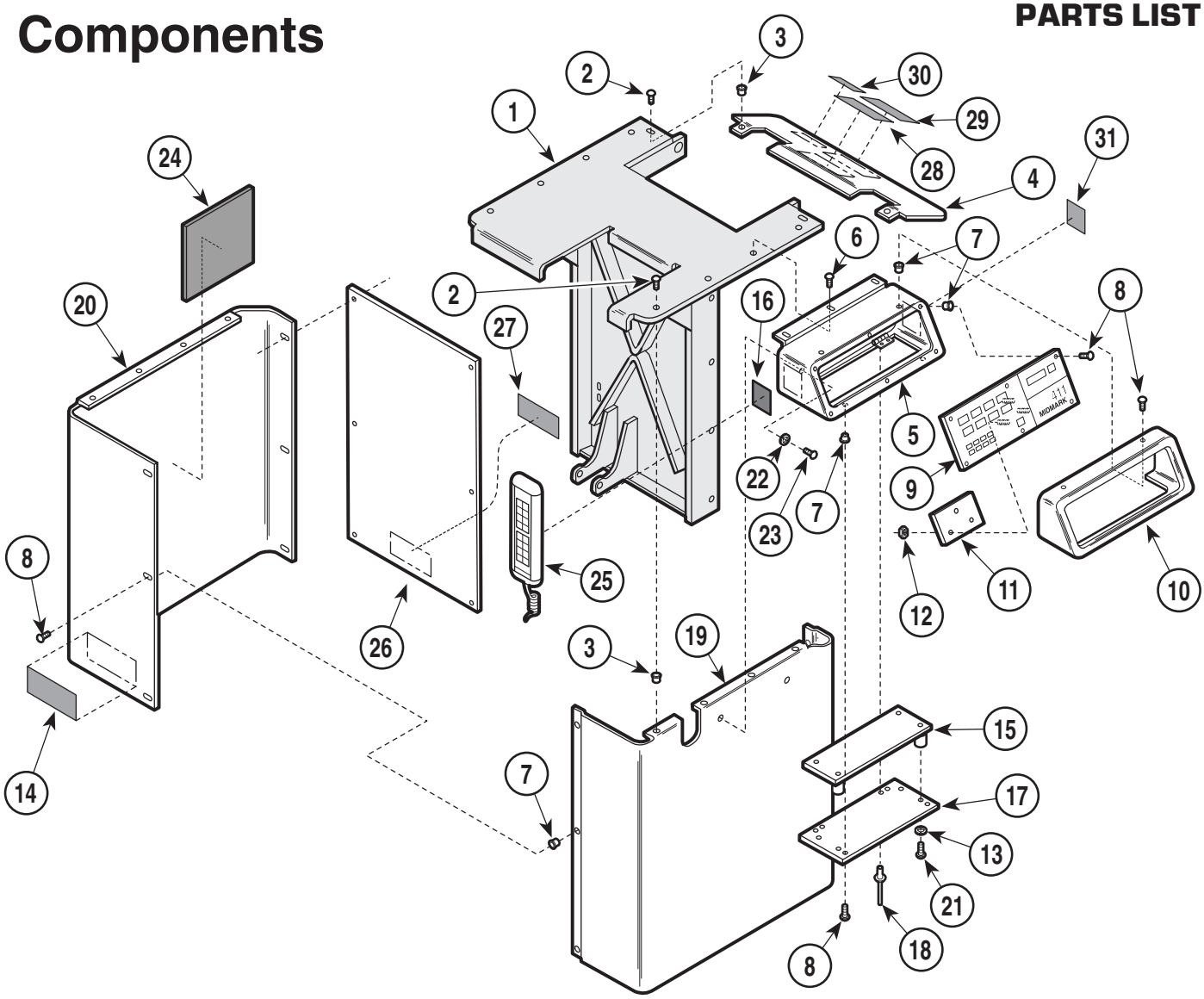
Covers and Control Components



MA257702

Used on units with Serial Number AV-2889 thru AV-3663

Item	Part No.	Description	Qty.
1		Inner Member Wldnt. (Refer to "Middle Member Components" Elsewhere)	Ref
2	040-0010-01	Screw	6
3	042-0045-01	Nutsert	6
4	050-1697-10	Sprocket Shroud	1
5	030-0747-10	Console Weldment	1
6	040-0010-04	Screw	2
7	042-0045-02	Nutsert	21
8	040-0008-29	Screw	21
9	*N.L.A.*	Program Panel	1
10	053-0218-00	Bezel	1
11	002-0347-03	Program Panel Interface Board Kit	1
12	041-0006-03	Nut	3
13	045-0001-45	Lockwasher	4
14	061-0293-00	Caution Label	1
15	002-0347-00	P.C. Logic Board Kit	1
16	053-0105-13	Velcro	1
17	050-1142-00	Console Cover	1
18	042-0010-00	Pop Rivet	4
19	050-1696-00	Shroud L.H. w/Notch Out (Shown)	1
	050-1696-01	Shroud L.H. (Not Shown)	1
20	050-1695-01	Shroud R.H. (Shown)	1
	050-1695-00	Shroud R.H. w/Notch Out (Not Shown)	1
21	040-0006-42	Screw	4
22	045-0001-18	Lockwasher	2
23	040-0010-47	Screw	4
24	054-0067-00	Sound Damp	2
25		Hand Control (Refer to "Hand Control Assembly" Elsewhere)	Ref
26	050-1698-10	Cover	1
27	061-0033-00	Caution Label	1
28		Serial Number Label	1
29	061-0301-00	U/L Listing Label	1
30	061-0291-00	Patent Label	1
31	061-0495-00	On / Off Label - R.H. (Not Shown)	1
	061-0190-00	On / Off Label - L.H. (Shown)	1

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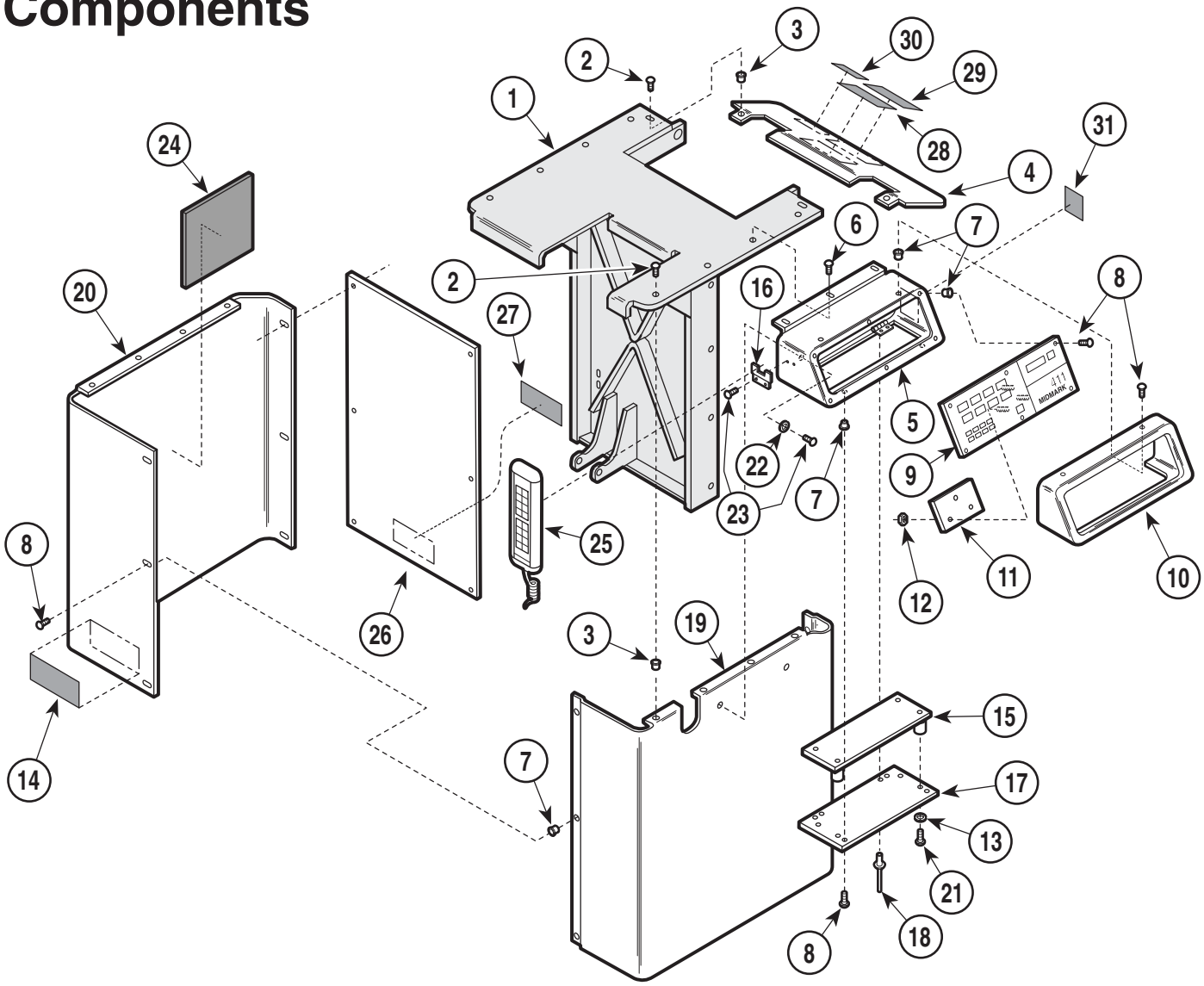
Covers and Control Components



MA257703

Used on units with Serial Number AV-3664 and DJ-1000 thru Present

Item	Part No.	Description	Qty.
1		Inner Member Wldnt. (Refer to "Middle Member Components" Elsewhere)	Ref
2	040-0010-01	Screw	6
3	042-0045-01	Nutsert	6
4	050-1697-10	Sprocket Shroud	1
5	030-0747-10	Console Weldment	1
6	040-0010-04	Screw	2
7	042-0045-02	Nutsert	21
8	040-0008-29	Screw	21
9	*N.L.A.*	Program Panel	1
10	053-0218-00	Bezel	1
11	002-0347-03	Program Panel Interface Board Kit	1
12	041-0006-03	Nut	3
13	045-0001-45	Lockwasher	4
14	061-0293-00	Sound Damp	1
15	002-0347-00	P.C. Logic Board Kit	1
16	050-1876-10	Bracket	1
17	050-1142-00	Console Cover	1
18	042-0010-00	Pop Rivet	4
19	050-1696-10	Shroud L.H. w/Notch Out (Shown)	1
	050-1696-11	Shroud L.H. (Not Shown)	1
20	050-1695-11	Shroud R.H. (Shown)	1
	050-1695-10	Shroud R.H. w/Notch Out (Not Shown)	1
21	040-0006-42	Screw	4
22	045-0001-18	Lockwasher	2
23	040-0010-47	Screw	4
24	054-0067-00	Sound Damp	2
25		Hand Control (Refer to "Hand Control Assembly" Elsewhere)	Ref
26	050-1698-10	Cover	1
27	061-0033-00	Caution Label	1
28		Serial Number Label	1
29	061-0301-00	U/L Listing Label	1
30	061-0291-00	Patent Label	1
31	061-0495-00	On / Off Label - R.H. (Not Shown)	1
	061-0190-00	On / Off Label - L.H. (Shown)	1

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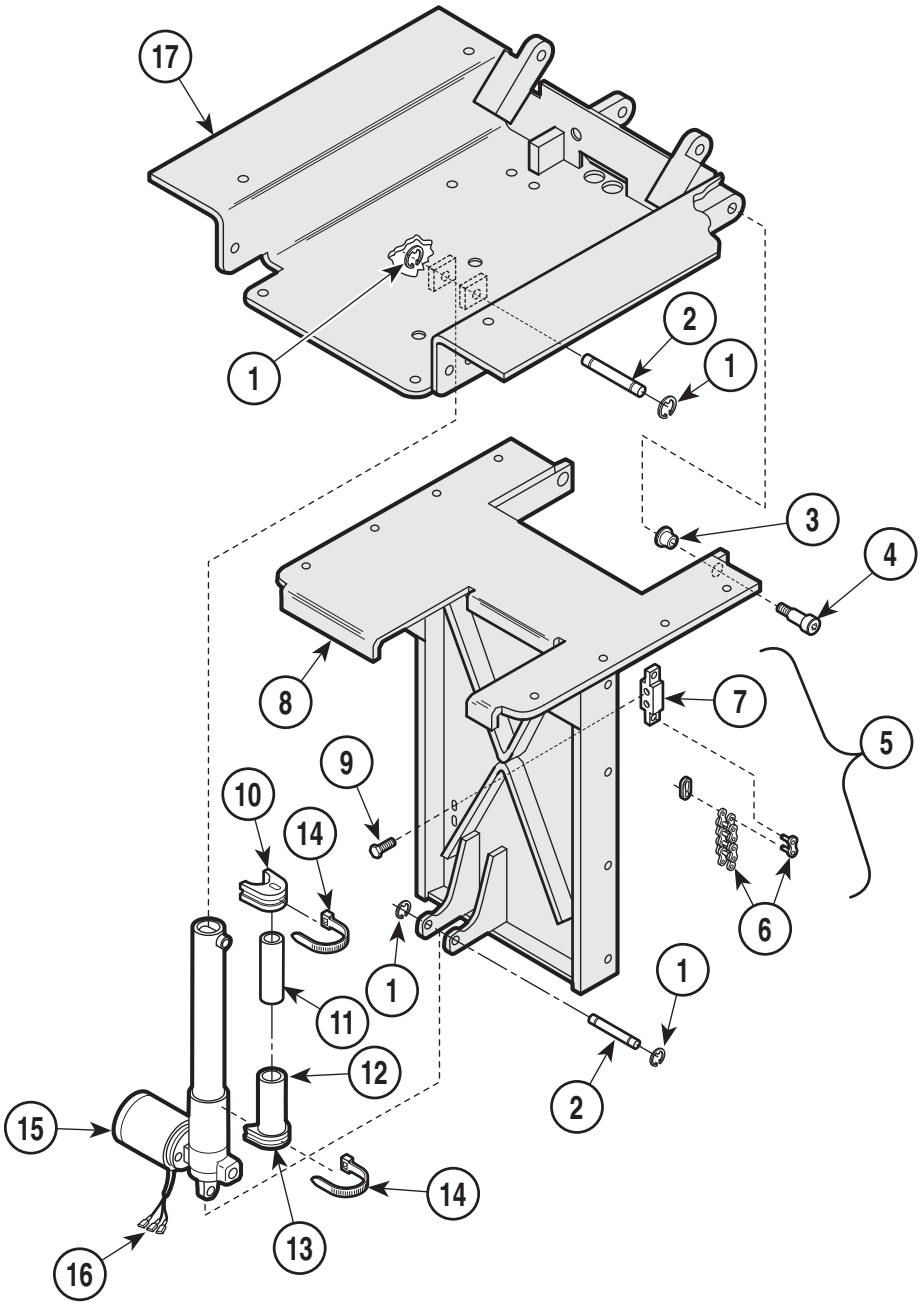
Inner Member Components



MA257801

Item	Part No.	Description	Qty.
1	042-0007-02	E-Ring	4
2	042-0048-02	Clevis Pin	2
3	016-0131-04	Flange Bearing	2
4	042-0014-05	Shoulder Bolt	2
5	029-0070-00	Chain Assembly (Includes Items 6 & 7)	2
6	• 016-0047-00	• Chain (Includes Connecting Links)	2
7	• 051-0027-00	• Adjustment Block 5/8	1
	• 051-0027-01	• Adjustment Block 7/8	1
8		Inner Member Wldnt. (Refer to "Middle Member Components" Elsewhere)	Ref
9	040-0375-00	Bolt	4
10	*N.L.A.*	Transmitter Mount Large	1
11	*N.L.A.*	Transmitter Assy. (Includes Sound Tube and Items 12 and 13)	1
	• *N.L.A.*	• Sound Tube	1
12	• *N.L.A.*	• Transmitter Tube	1
13	• *N.L.A.*	• Transmitter Mount Large	1
14	015-0472-00	Cable Tie	2
15		Tilt Actuator (Refer to "Base and Tilt Actuator Assembly" Elsewhere)	Ref
16	015-0312-00	Terminal	3
17		Seat Weldment (Refer to "Seat Components" Elsewhere)	Ref

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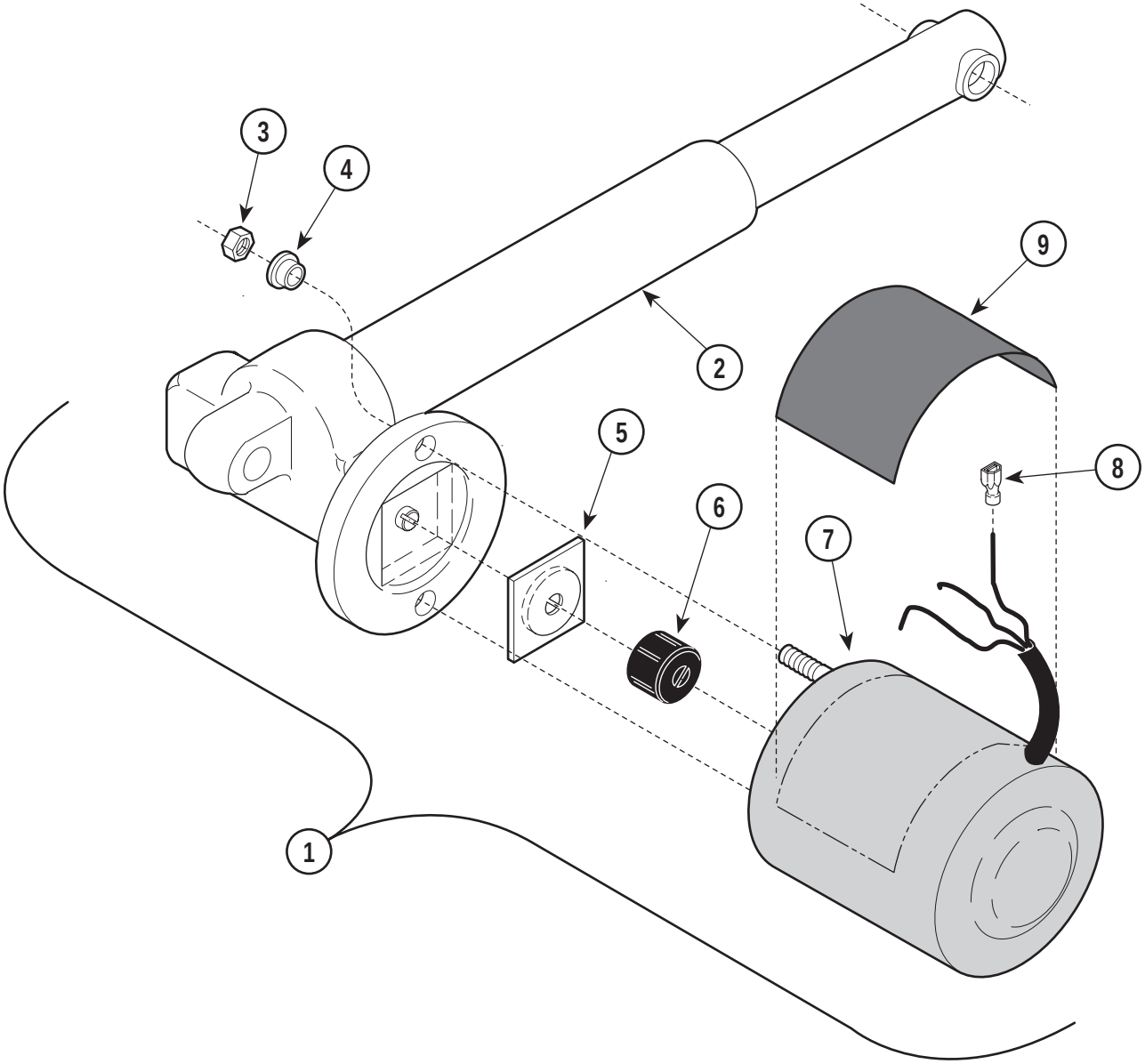
Base and Tilt Actuator Assembly



MA294900

Used on units with Serial Numbers AV1000 thru AV8714, DJ1000 thru DJ1220, & DW1000

Item	Part No.	Description	Qty.
1	002-0214-00	Actuator Assembly - Domestic (Includes Items 2 thru 8)	1
	029-0562-01	Actuator Assembly - Export (Includes Items 2 thru 8)	1
2	• 016-0231-05	• Actuator (Less Motor)	1
3	•	• Nut	2
4	• 053-0198-00	• Shoulder Washer	2
5	• 016-0237-00	• Actuator Brake	1
6	• 016-0509-00	• Motor Coupler	1
7	• 002-0574-00	• Motor - Domestic (Less Terminals)	1
	• 002-0574-02	• Motor - Export (Less Terminals)	1
8	• 015-0312-00	• Terminal	3
9	061-0135-00	Caution Label	1

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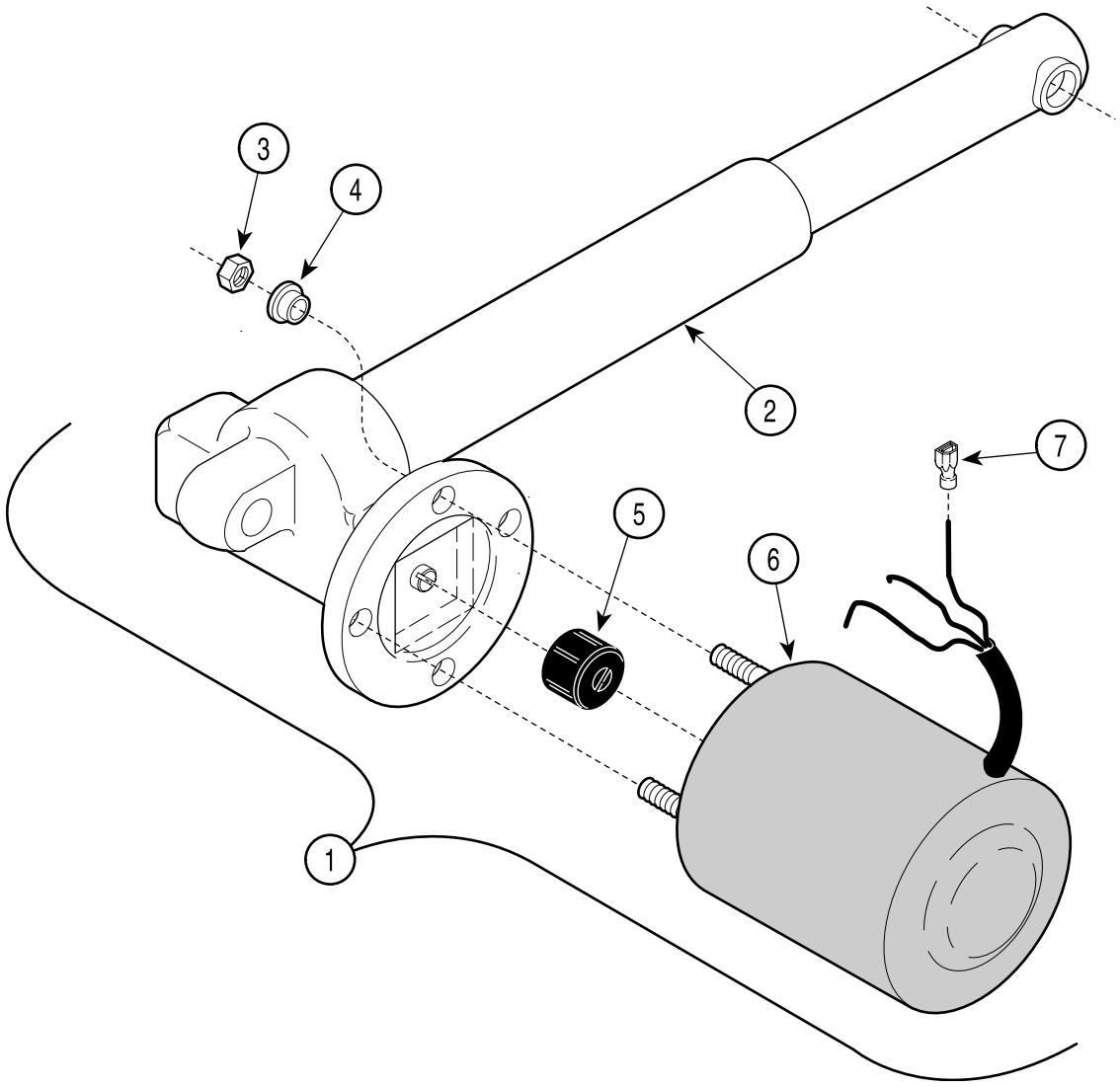
Base and Tilt Actuator Assembly



MA294901

Used on units with Serial Numbers AV8715, DJ1220, & DW1001 thru Present

Item	Part No.	Description	Qty.
1	029-0562-00	Actuator Assembly - 115 VAC (Includes Items 2 thru 7)	1
	029-0562-01	Actuator Assembly - 220 VAC (Includes Items 2 thru 7)	1
2	•	• Actuator (Less Motor)	1
3	•	• Nut	2
4	• 053-0198-00	• Shoulder Washer	2
5	• 016-0662-00	• Motor Coupler	1
6	• 015-1085-00	• Motor - 115 VAC (Less Terminals)	1
	• 015-1085-02	• Motor - 220 VAC (Less Terminals)	1
7	• 015-0315-15	• Terminal	3

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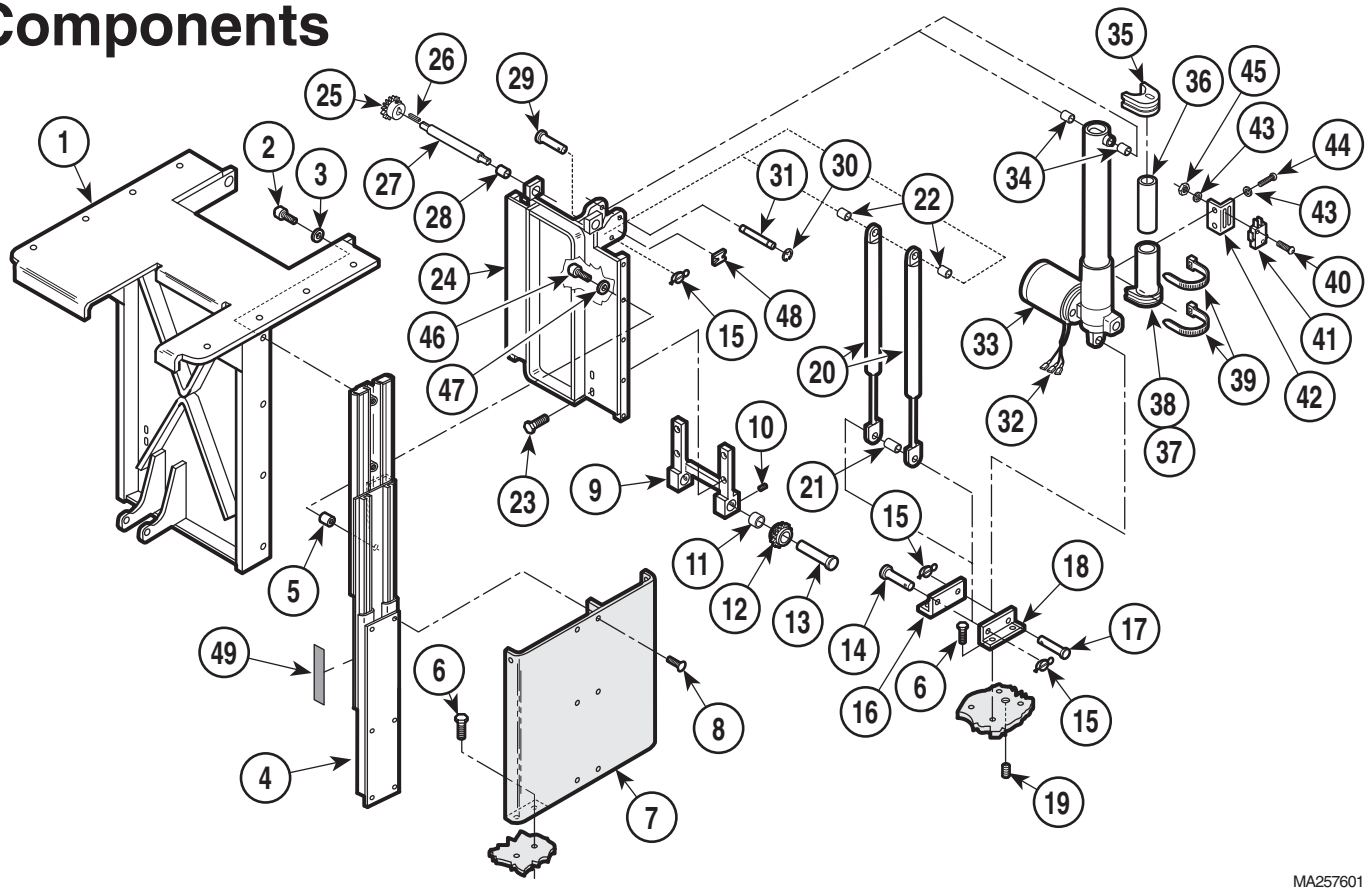
Middle Member Components



MA257601

Used on units with Serial Number AV-1000 thru AV-3408

Item	Part No.	Description	Qty.
1	030-0614-00	Inner Member Weldment	1
2	040-0250-10	Bolt	8
3	045-0001-03	Lockwasher	8
4	016-0234-01	Base Side L.H. (Shown)	1
	016-0234-00	Base Side R.H.	1
5	052-0015-00	Spacer	10
6	040-0375-50	Bolt	12
7		Support Channel Wldnt. (Refer to "Base Components" Elsewhere)	Ref
8	040-0250-35	Bolt	12
9	029-0478-00	Idler Adjuster Assembly (Includes Idler Adjuster and Items 10 thru 13)	1
	• 030-0386-00	• Idler Adjuster	1
10	• 040-0250-04	• Set Screw	4
11	• 016-0149-00	• Bearing	2
12	• 016-0152-00	• Sprocket	2
13	• 030-0274-00	• Journal Weldment	2
14	042-0005-03	Clevis Pin	1
15	042-0004-00	Hitch Pin Clip	3
16	059-0029-00	Actuator R.H. Hitch	1
17	042-0602-02	Clevis Pin	1
18	059-0029-01	Actuator L.H. Hitch	1
19	040-0375-28	Set Screw	1
20	016-0236-01	Gas Cylinder	2
21	016-0148-09	Spacer	1
22	016-0148-07	Spacer	2
23	040-0375-00	Bolt	4
24	029-0476-00	Middle Member Assy. (Includes Middle Member Wldnt. and Items 24 thru 28)	1
	• 030-0388-00	• Middle Member Weldment	1
25	• 016-0151-00	• Sprocket	2
26	• 042-0008-00	• Key	2
27	• 057-0163-00	• Axle	1
28	• 016-0149-00	• Bearing	2
29	042-0602-03	Clevis Pin	1
30	042-0007-02	E-Ring	2
31	042-0048-03	Clevis Pin	1
32	015-0312-00	Terminal	3
33		Base Actuator (Refer to "Base and Tilt Actuator Assembly" Elsewhere)	Ref
34	016-0148-07	Spacer	2
35	*N.L.A.*	Transmitter Mount Large	1
36	*N.L.A.*	Transmitter Assy. (Includes Sound Tube and Items 37 and 38)	1
	• *N.L.A.*	• Sound Tube	1
37	• *N.L.A.*	• Transmitter Tube	1
38	• *N.L.A.*	• Transmitter Mount Large	1
39	015-0472-00	Cable Tie	2
40	040-0004-09	Screw	2
41	015-0476-00	Switch	1
42	050-1200-00	Switch Bracket	1
43	045-0001-20	Lockwasher	2
44	040-0006-36	Screw	2
45	041-0004-01	Nut	2
46	040-0008-30	Screw	10
47	045-0001-10	Lockwasher	10
48	015-0220-00	Cable Mounting	1
49	061-0045-00	Caution Label	2

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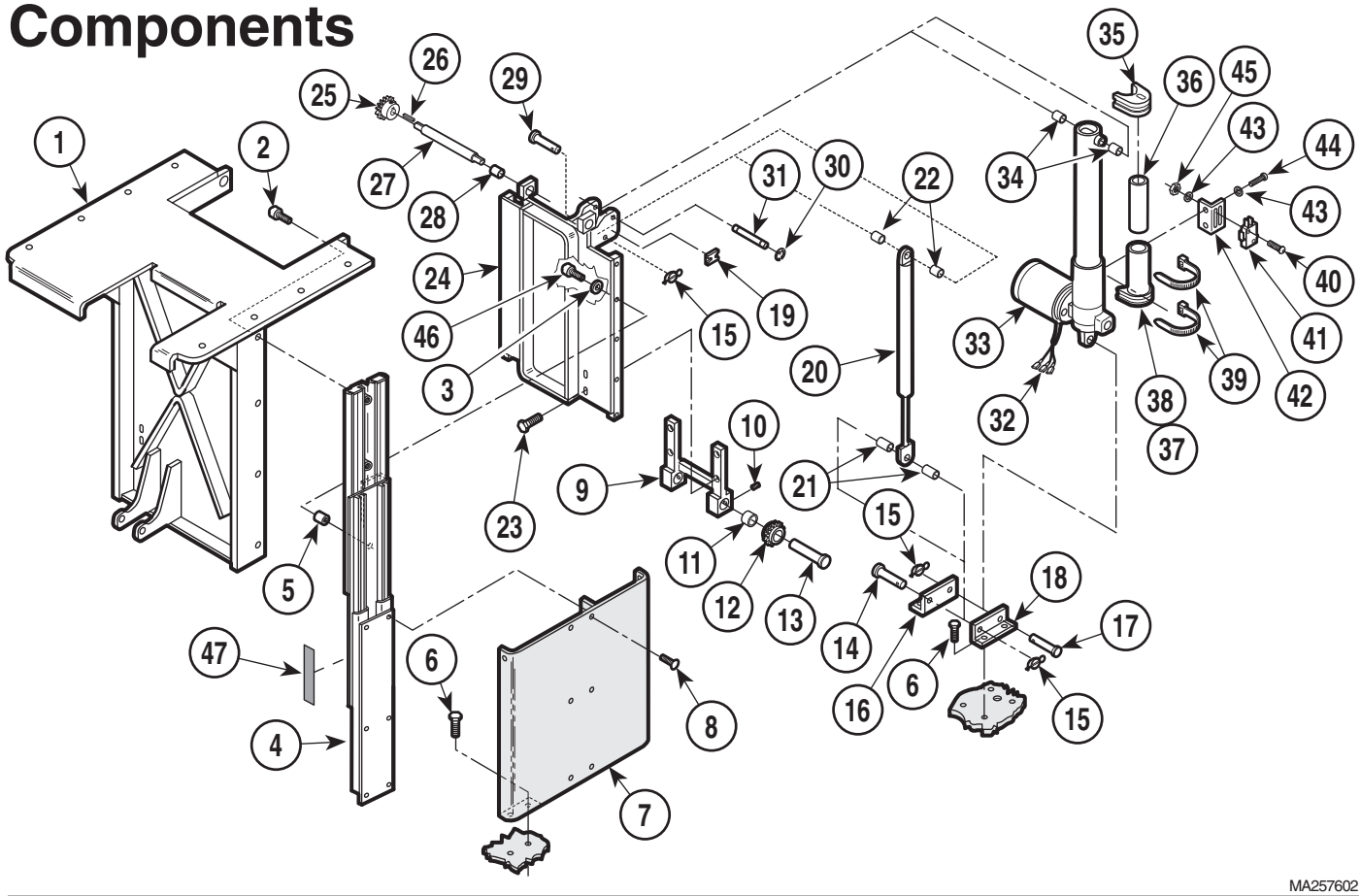
Middle Member Components



MA257602

Used on units with Serial Number AV-3409 thru Present

Item	Part No.	Description	Qty.
1	030-0614-01	Inner Member Weldment	1
2	040-0250-88	Bolt	8
3	045-0001-10	Lockwasher	10
4	016-0234-01	Base Side L.H. (Shown)	1
	016-0234-00	Base Side R.H.	1
5	052-0015-00	Spacer	10
6	040-0375-50	Bolt	12
7		Support Channel Wldnt. (Refer to "Base Components" Elsewhere)	Ref
8	040-0250-35	Bolt	12
9	029-0478-00	Idler Adjuster Assembly (Includes Idler Adjuster and Items 10 thru 13)	1
	• 030-0386-00	• Idler Adjuster	1
10	• 040-0250-04	• Set Screw	2
11	• 016-0149-00	• Bearing	2
12	• 016-0152-00	• Sprocket	2
13	• 030-0274-00	• Journal Weldment	2
14	042-0005-03	Clevis Pin	1
15	042-0004-00	Hitch Pin Clip	3
16	059-0029-00	Actuator R.H. Hitch	1
17	042-0602-02	Clevis Pin	1
18	059-0029-01	Actuator L.H. Hitch	1
19	015-0220-00	Cable Mounting	1
20	002-0213-00	Gas Cylinder Kit	1
21	016-0148-08	Spacer	2
22	016-0148-07	Spacer	2
23	040-0375-00	Bolt	4
24	029-0476-00	Middle Member Assy. (Includes Middle Member Wldnt. and Items 24 thru 28)	1
	• 030-0388-00	• Middle Member Weldment	1
25	• 016-0151-00	• Sprocket	2
26	• 042-0008-00	• Key	2
27	• 057-0163-00	• Axle	1
28	• 016-0149-00	• Bearing	2
29	042-0602-03	Clevis Pin	1
30	042-0007-02	E-Ring	2
31	042-0048-03	Clevis Pin	1
32	015-0312-00	Terminal	3
33		Base Actuator (Refer to "Base and Tilt Actuator Assembly" Elsewhere)	Ref
34	016-0148-07	Spacer	2
35	*N.L.A.*	Transmitter Mount Large	1
36	*N.L.A.*	Transmitter Assy. (Includes Sound Tube and Items 37 and 38)	1
	• *N.L.A.*	• Sound Tube	1
37	• *N.L.A.*	• Transmitter Tube	1
38	• *N.L.A.*	• Transmitter Mount Large	1
39	015-0472-00	Cable Tie	2
40	040-0004-09	Screw	2
41	015-0476-00	Switch	1
42	050-1200-00	Switch Bracket	1
43	045-0001-20	Lockwasher	2
44	040-0006-36	Screw	2
45	041-0004-01	Nut	2
46	040-0008-30	Screw	10
47	061-0045-00	Caution Label	2

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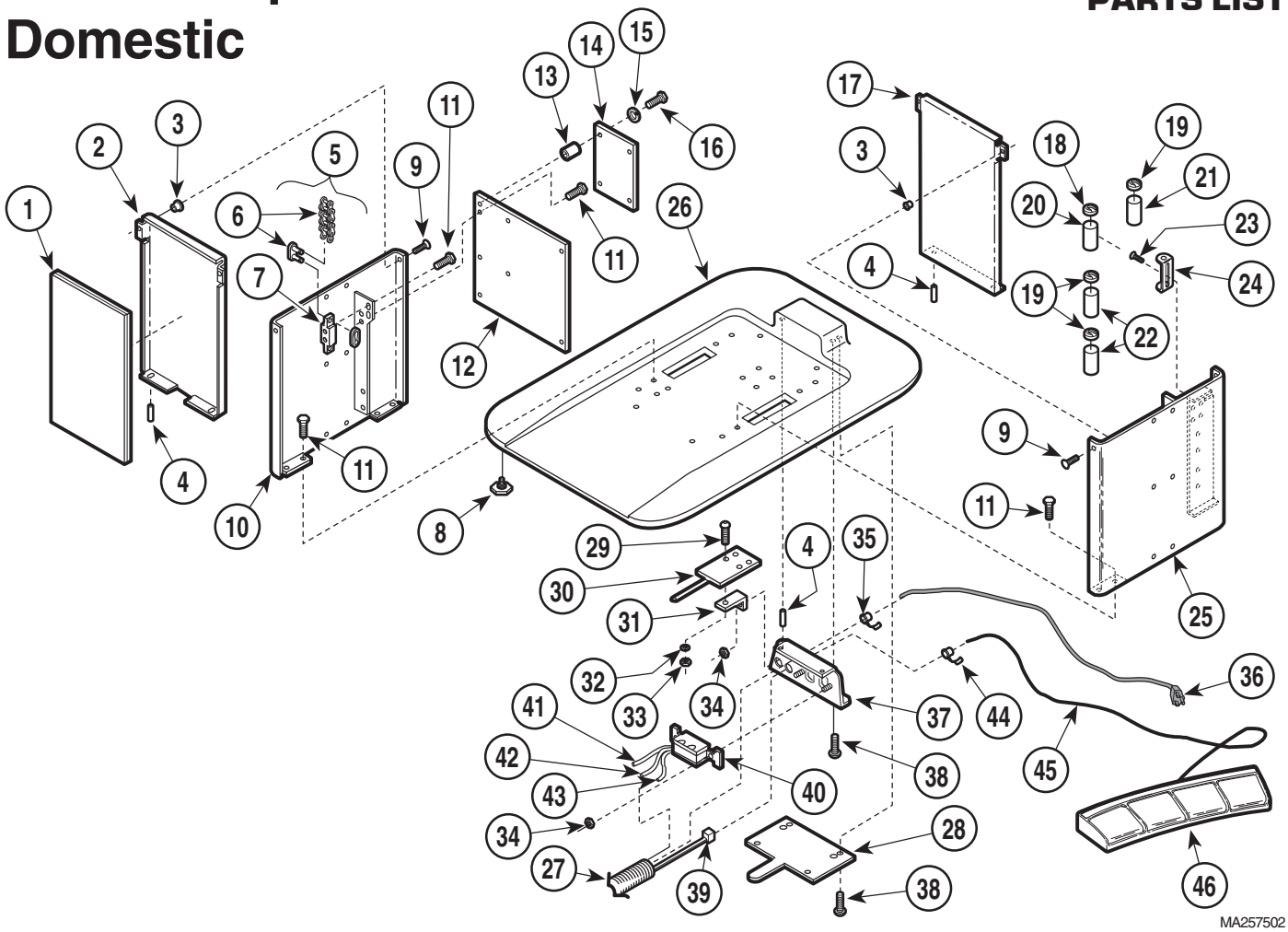
Base Components - Domestic



MA257502

Used on units with Serial Number AV-1000 thru AV-1179

Item	Part No.	Description	Qty.
1	054-0074-00	Sound Damp	1
2	050-1105-00	Back Lower Shroud	1
3	042-0045-03	Nutsert	4
4	042-0009-01	Groove Pin	6
5	029-0070-00	Chain Assembly (Includes Items 6 & 7)	2
6	• 016-0047-00	• Chain (Includes Connecting Links)	2
7	• 051-0027-00	• Adjustment Block 5/8	1
	• 051-0027-01	• Adjustment Block 7/8	1
8	016-0001-01	Leveling Screw	4
9	040-0250-54	Screw	4
10	030-0387-00	R.H. Support Channel	1
11	040-0375-50	Bolt	16
12	050-1118-00	Brace	1
13	016-0148-06	Spacer	4
14	*(N.L.A.)*	Interface Board	1
	• 015-0346-02	Fuse (.15 amp.)	1
	• 015-0346-03	Fuse (5 amp.)	4
15	045-0001-08	Lockwasher	8
16	040-0010-43	Screw	4
17	050-1105-01	Front Lower Shroud	1
18	015-0413-00	Capacitor Cap	1
19	015-0413-01	Capacitor Cap	3
20	015-0437-04	Capacitor (Foot)	1
21	015-0437-03	Capacitor (Back)	1
22	015-0437-00	Capacitor (Base [Bottom], Tilt [Top])	2

Item	Part No.	Description	Qty.
23	040-0010-62	Screw	8
24	015-0412-00	Mounting Bracket	4
25	030-0387-01	L.H.Support Channel	1
26	020-0045-00	Base Casting	1
27	015-0466-01	Heat Shrink Tubing - 3"	1
28	050-1132-00	Wire Cover	1
29	040-0006-10	Screw	2
30	015-0486-00	PC Hand Control	1
31	050-1252-00	PC Bracket	2
32	045-0001-45	Lockwasher	2
33	041-0006-00	Nut	2
34	041-0008-00	Nut	4
35	015-0002-01	Strain Relief Bushing	1
36	015-0066-07	Power Cord	1
37	030-0402-00	Power Inlet Weldment	1
38	040-0008-04	Screw	6
39	015-0508-00	Internal Footswitch Cable	1
40	015-0083-01	Receptacle	1
41	015-0100-02	Jumper Wire (Black)	1
42	015-0101-03	Jumper Wire (Grn,Yel)	1
43	015-0100-03	Jumper Wire (White)	1
44	015-0002-05	Strain Relief Bushing	1
45	015-0452-00	Footswitch Cable	1
46		Footswitch (Refer to "9A8400* Foot Control" in the Accessory Manual)	1

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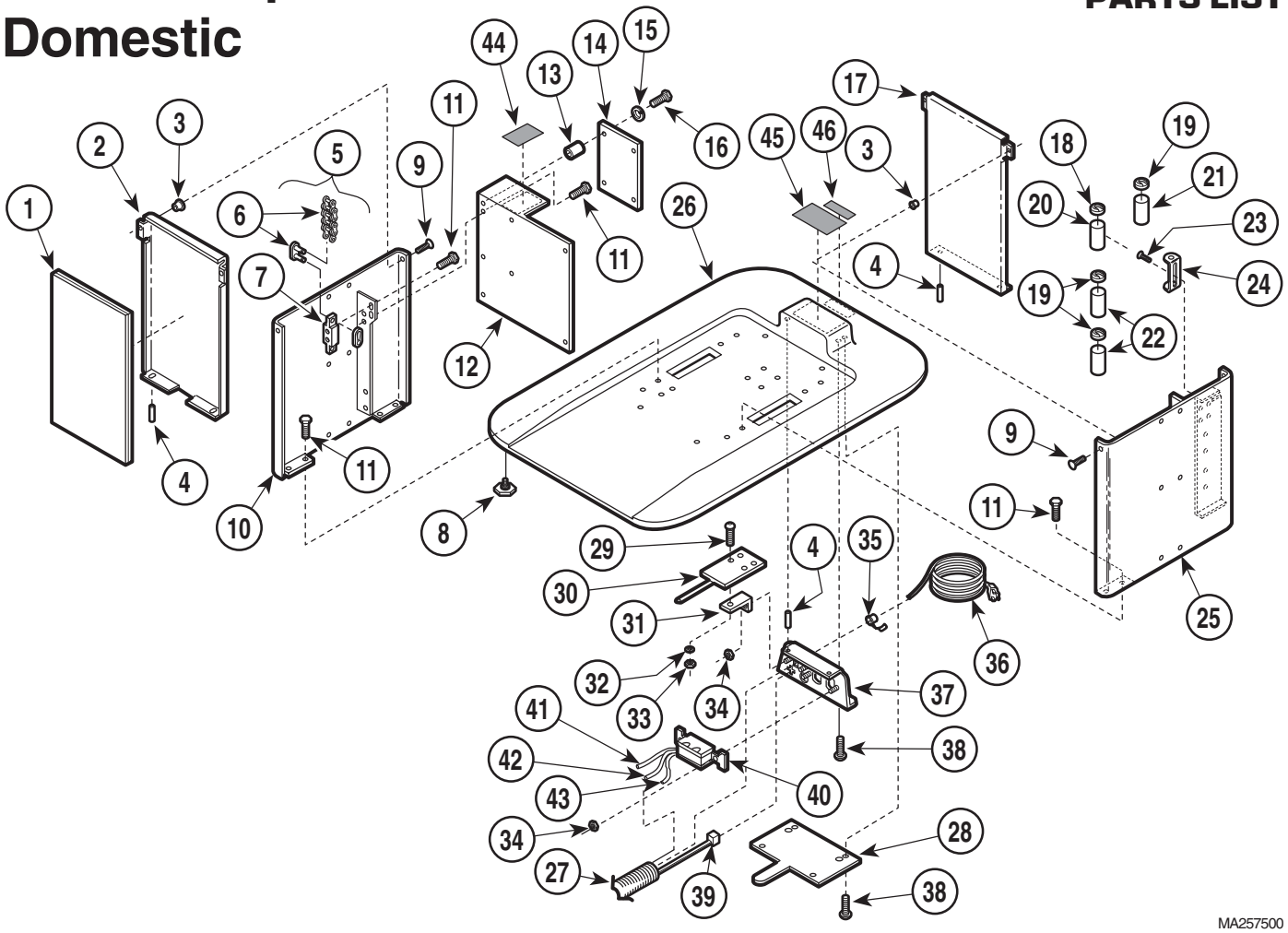
Base Components - Domestic



MA257500

Used on units with Serial Number AV-1180 thru AV-2217

Item	Part No.	Description	Qty.
1	054-0074-00	Sound Damp	1
2	050-1105-00	Back Lower Shroud	1
3	042-0045-03	Nutsert	4
4	042-0009-01	Groove Pin	6
5	029-0070-00	Chain Assembly (Includes Items 6 & 7)	2
6	• 016-0047-00	• Chain (Includes Connecting Links)	2
7	• 051-0027-00	• Adjustment Block 5/8	1
	• 051-0027-01	• Adjustment Block 7/8	1
8	016-0001-01	Leveling Screw	4
9	040-0250-54	Screw	4
10	030-0387-00	R.H. Support Channel	1
11	040-0375-50	Bolt	16
12	050-1559-00	Brace	1
13	015-0599-00	Hex Standoff	4
14	*(N.L.A.)*	Interface Board	1
	• 015-0346-02	Fuse (.15 amp.)	1
	• 015-0346-03	Fuse (5 amp.)	4
15	045-0001-08	Lockwasher	8
16	040-0010-34	Screw	4
17	050-1105-01	Front Lower Shroud	1
18	015-0413-00	Capacitor Cap	1
19	015-0413-01	Capacitor Cap	3
20	015-0437-04	Capacitor (Foot)	1
21	015-0437-03	Capacitor (Back)	1
22	015-0437-00	Capacitor (Base [Bottom], Tilt [Top])	2

Item	Part No.	Description	Qty.
23	040-0010-62	Screw	8
24	015-0412-00	Mounting Bracket	4
25	030-0387-01	L.H.Support Channel	1
26	020-0045-00	Base Casting	1
27	015-0466-01	Heat Shrink Tubing - 3"	1
28	050-1132-00	Wire Cover	1
29	040-0006-10	Screw	2
30	015-0486-00	PC Hand Control	1
31	050-1252-00	PC Bracket	2
32	045-0001-45	Lockwasher	2
33	041-0006-00	Nut	2
34	041-0008-00	Nut	4
35	015-0002-01	Strain Relief Bushing	1
36	015-0066-07	Power Cord	1
37	030-0402-00	Power Inlet Weldment	1
38	040-0008-04	Screw	6
39	015-0508-00	Internal Footswitch Cable	1
40	015-0083-01	Receptacle	1
41	015-0100-02	Jumper Wire (Black)	1
42	015-0101-03	Jumper Wire (Grn,Yel)	1
43	015-0100-03	Jumper Wire (White)	1
44	061-0195-00	Fuse Label	1
45	061-0174-00	Receptacle Label (Domestic Only)	1
46	061-0295-00	Cord Tag (Domestic Only)	1

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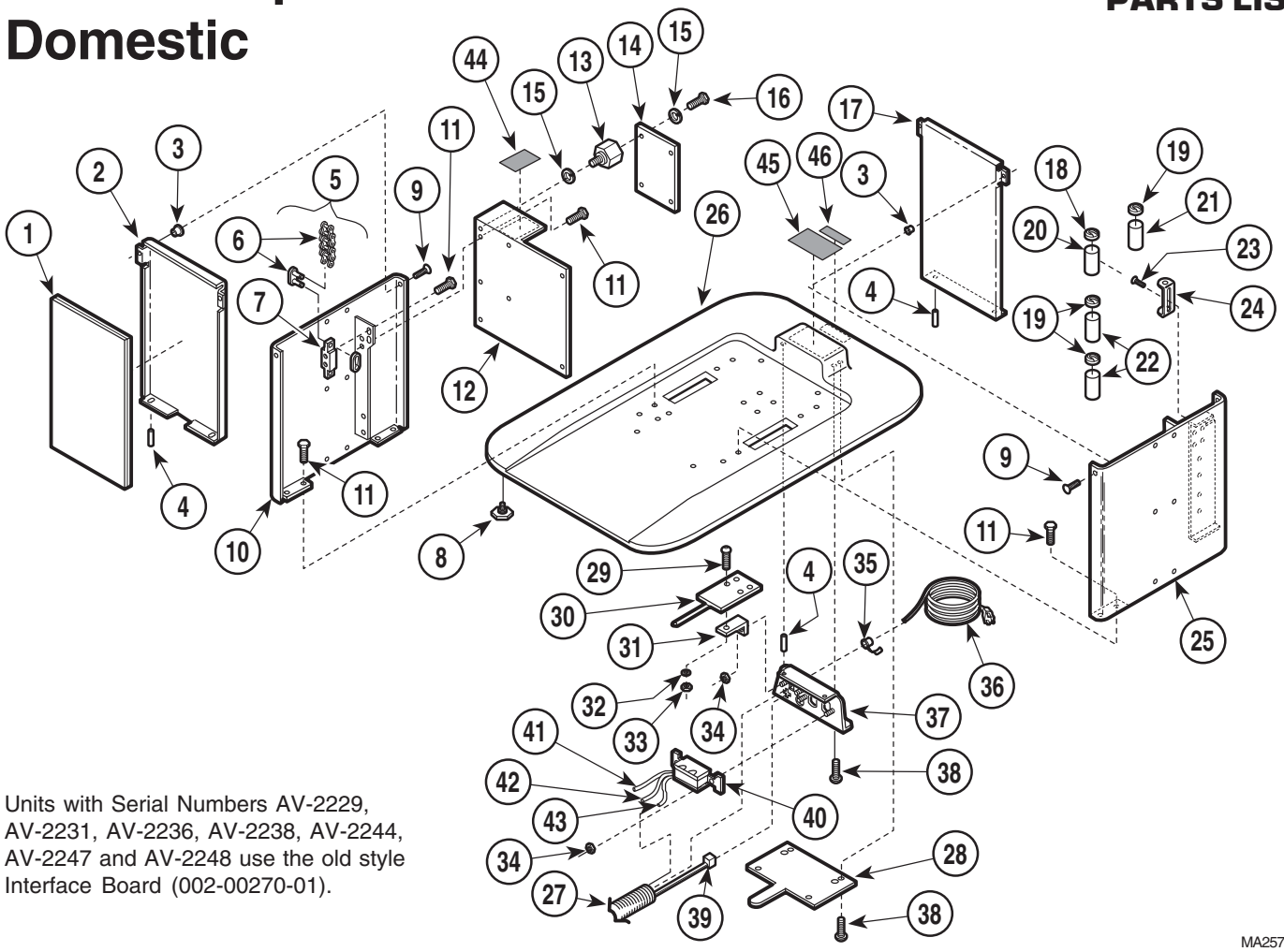
Base Components - Domestic



Units with Serial Numbers AV-2229, AV-2231, AV-2236, AV-2238, AV-2244, AV-2247 and AV-2248 use the old style Interface Board (002-00270-01).

MA257500

Used on units with Serial Number AV-2218 thru AV-2256

Item	Part No.	Description	Qty.
1	054-0074-00	Sound Damp	1
2	050-1105-00	Back Lower Shroud	1
3	042-0045-03	Nutsert	4
4	042-0009-01	Groove Pin	6
5	029-0070-00	Chain Assembly (Includes Items 6 & 7)	2
6	• 016-0047-00	• Chain (Includes Connecting Links)	2
7	• 051-0027-00	• Adjustment Block 5/8	1
	• 051-0027-01	• Adjustment Block 7/8	1
8	016-0001-01	Leveling Screw	4
9	040-0250-54	Screw	4
10	030-0387-00	R.H. Support Channel	1
11	040-0375-50	Bolt	16
12	050-1559-00	Brace	1
13	015-0599-00	Hex Standoff	4
14	*(N.L.A.)*	Interface Board	1
	• 015-0346-02	Fuse (.15 amp.)	1
	• 015-0346-03	Fuse (5 amp.)	4
15	045-0001-08	Lockwasher	8
16	040-0010-34	Screw	4
17	050-1105-01	Front Lower Shroud	1
18	015-0413-00	Capacitor Cap	1
19	015-0413-01	Capacitor Cap	3
20	015-0437-04	Capacitor (Foot)	1
21	015-0437-03	Capacitor (Back)	1
22	015-0437-00	Capacitor (Base [Bottom], Tilt [Top])	2
23	040-0010-62	Screw	8
24	015-0412-00	Mounting Bracket	4
25	030-0387-01	L.H.Support Channel	1
26	020-0045-00	Base Casting	1
27	015-0466-01	Heat Shrink Tubing - 3"	1
28	050-1132-00	Wire Cover	1
29	040-0006-10	Screw	2
30	015-0486-00	PC Hand Control	1
31	050-1252-00	PC Bracket	2
32	045-0001-45	Lockwasher	2
33	041-0006-00	Nut	2
34	041-0008-00	Nut	4
35	015-0002-01	Strain Relief Bushing	1
36	015-0066-07	Power Cord	1
37	030-0402-00	Power Inlet Weldment	1
38	040-0008-04	Screw	6
39	015-0508-00	Internal Footswitch Cable	1
40	015-0083-01	Receptacle	1
41	015-0100-02	Jumper Wire (Black)	1
42	015-0101-03	Jumper Wire (Grn,Yel)	1
43	015-0100-03	Jumper Wire (White)	1
44	061-0195-00	Fuse Label	1
45	061-0174-00	Receptacle Label (Domestic Only)	1
46	061-0295-00	Cord Tag (Domestic Only)	1

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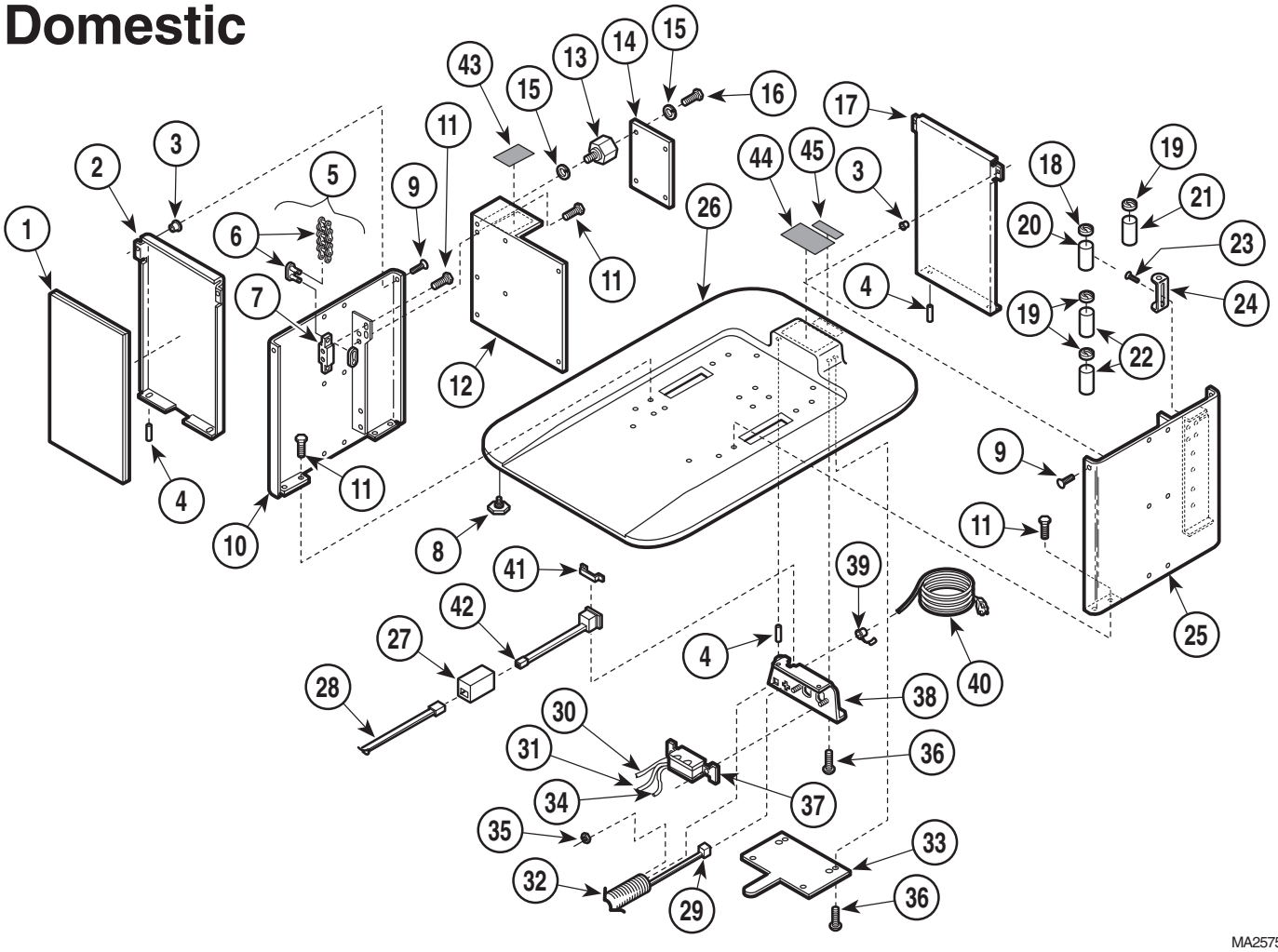
Base Components - Domestic



MA257501

Used on units with Serial Number AV-2257 thru AV-4456

Item	Part No.	Description	Qty.
1	054-0074-00	Sound Damp	1
2	050-1105-00	Back Lower Shroud	1
3	042-0045-03	Nutsert	4
4	042-0009-01	Groove Pin	6
5	029-0070-00	Chain Assembly (Includes Items 6 & 7)	2
6	• 016-0047-00	• Chain (Includes Connecting Links)	2
7	• 051-0027-00	• Adjustment Block 5/8	1
	• 051-0027-01	• Adjustment Block 7/8	1
8	016-0001-01	Leveling Screw	4
9	040-0250-54	Screw	4
10	030-0387-00	R.H. Support Channel	1
11	040-0375-50	Bolt	16
12	050-1559-00	Brace	1
13	015-0599-00	Hex Standoff	4
14	*(N.L.A.)*	Interface Board	1
	• 015-0346-02	Fuse (.15 amp.)	1
	• 015-0346-03	Fuse (5 amp.)	4
15	045-0001-08	Lockwasher	8
16	040-0010-34	Screw	4
17	050-1105-01	Front Lower Shroud	1
18	015-0413-00	Capacitor Cap	1
19	015-0413-01	Capacitor Cap	3
20	015-0437-04	Capacitor (Foot)	1
21	015-0437-03	Capacitor (Back)	1
22	015-0437-00	Capacitor (Base [Bottom], Tilt [Top])	2
23	040-0010-62	Screw	8
24	015-0412-00	Mounting Bracket	4
25	030-0387-01	L.H.Support Channel	1
26	020-0045-00	Base Casting	1
27	015-0540-00	Modular Couplier	1
28	015-0535-02	Cord	1
29	015-0508-00	Internal Footswitch Cable	1
30	015-0100-02	Jumper Wire (Black)	1
31	015-0101-03	Jumper Wire (Grn,Yel)	1
32	015-0466-01	Heat Shrink Tubing	1
33	050-1132-00	Wire Cover	1
34	015-0100-03	Jumper Wire (White)	1
35	041-0008-00	Nut	2
36	040-0008-04	Screw	6
37	015-0083-01	Receptacle	1
38	030-0608-00	Power Inlet Weldment	1
39	015-0002-01	Strain Relief	1
40	015-0066-07	Power Cord	1
41	050-1544-00	Spring Retainer Clip	1
42	015-0524-00	Harness Jack	1
43	061-0195-00	Fuse Label	1
44	061-0174-00	Receptacle Label (Domestic Only)	1
45	061-0295-00	Cord Tag (Domestic Only)	1

N.L.A. Denotes "No Longer Available"

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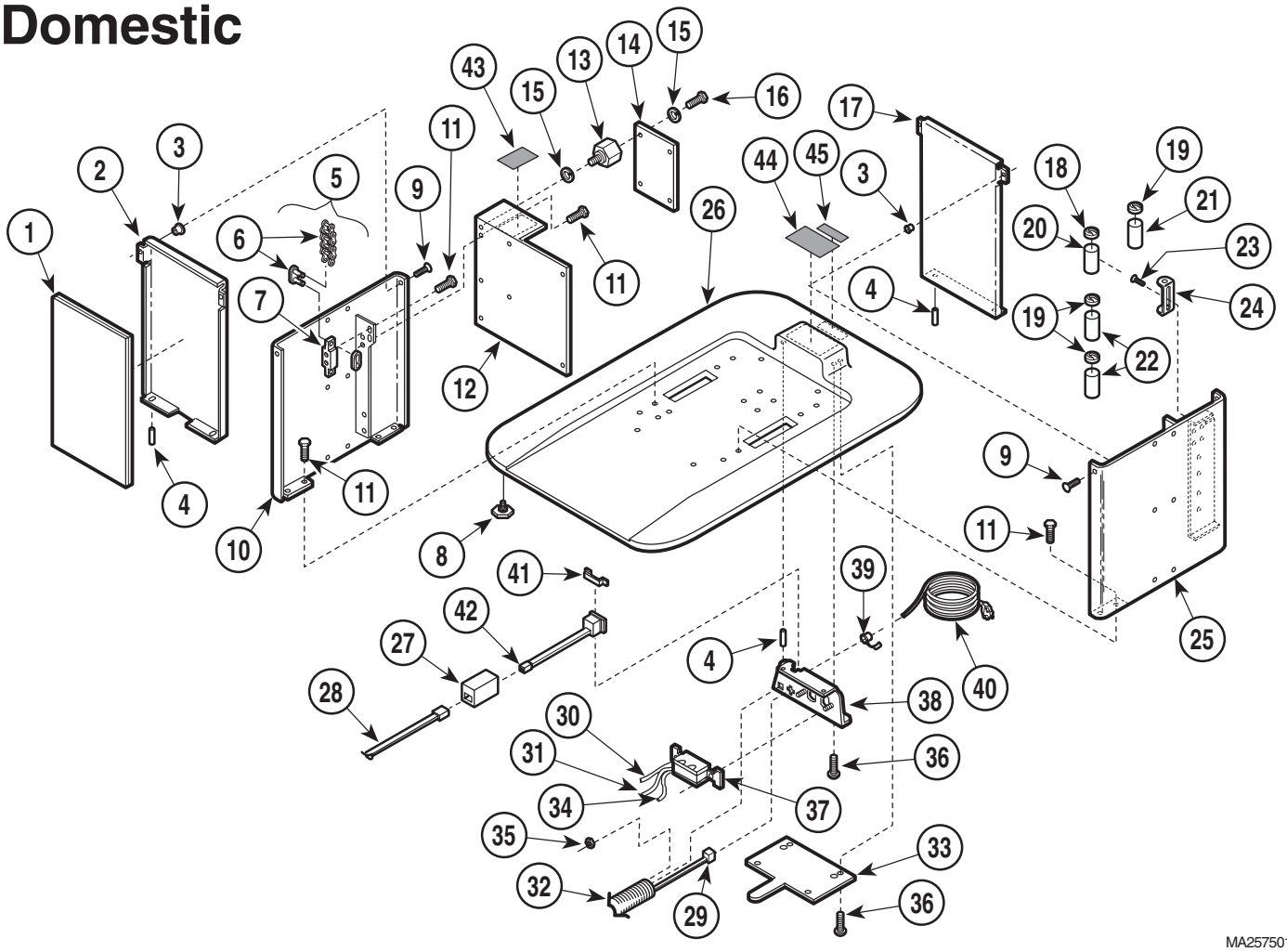
Base Components - Domestic



MA257501

Used on units with Serial Number AV-4457 thru Present

Item	Part No.	Description	Qty.
1	054-0074-00	Sound Damp	1
2	050-1105-02	Back Lower Shroud	1
3	042-0045-03	Nutsert	4
4	042-0009-01	Groove Pin	6
5	029-0070-00	Chain Assembly (Includes Items 6 & 7)	2
6	• 016-0047-00	• Chain (Includes Connecting Links)	2
7	• 051-0027-00	• Adjustment Block 5/8	1
	• 051-0027-01	• Adjustment Block 7/8	1
8	016-0001-01	Leveling Screw	4
9	040-0250-54	Screw	4
10	030-0387-03	R.H. Support Channel	1
11	040-0375-50	Bolt	16
12	050-1559-00	Brace	1
13	015-0599-00	Hex Standoff	4
14	*(N.L.A.)*	Interface Board	1
	• 015-0346-02	Fuse (.15 amp.)	1
	• 015-0346-03	Fuse (5 amp.)	4
15	045-0001-08	Lockwasher	8
16	040-0010-34	Screw	4
17	050-1105-03	Front Lower Shroud	1
18	015-0413-00	Capacitor Cap	1
19	015-0413-01	Capacitor Cap	3
20	015-0437-04	Capacitor (Foot)	1
21	015-0437-03	Capacitor (Back)	1
22	015-0437-00	Capacitor (Base [Bottom], Tilt [Top])	2
23	040-0010-62	Screw	8
24	015-0412-00	Mounting Bracket	4
25	030-0387-04	L.H.Support Channel	1
26	020-0045-02	Base Casting	1
27	015-0540-00	Modular Couplier	1
28	015-0535-02	Cord	1
29	015-0508-00	Internal Footswitch Cable	1
30	015-0100-02	Jumper Wire (Black)	1
31	015-0101-03	Jumper Wire (Grn,Yel)	1
32	015-0466-01	Heat Shrink Tubing	1
33	050-1132-00	Wire Cover	1
34	015-0100-03	Jumper Wire (White)	1
35	041-0008-00	Nut	2
36	040-0008-04	Screw	6
37	015-0083-01	Receptacle	1
38	030-0608-01	Power Inlet Weldment	1
39	015-0002-01	Strain Relief	1
40	015-0066-07	Power Cord	1
41	050-1544-00	Spring Retainer Clip	1
42	015-0524-00	Harness Jack	1
43	061-0195-00	Fuse Label	1
44	061-0174-00	Receptacle Label	1
45	061-0295-00	Cord Tag	1

N.L.A. Denotes "No Longer Available"

Always Specify Model & Serial Number

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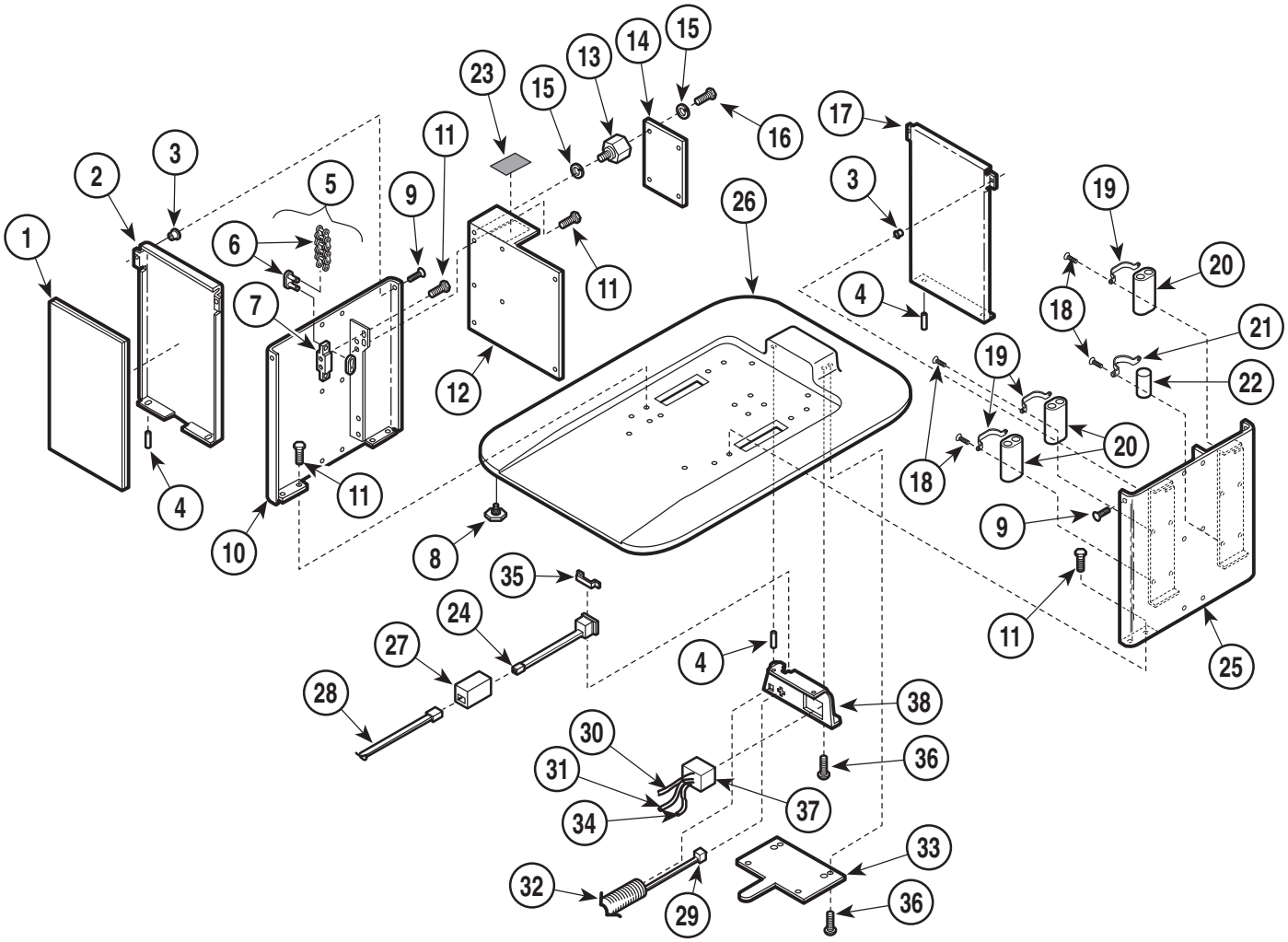
Base Components - Export



MA295700

Used on units with Serial Number DJ-1000 thru DJ-1018

Item	Part No.	Description	Qty.
1	054-0074-00	Sound Damp	1
2	050-1105-00	Back Lower Shroud	1
3	042-0045-03	Nutsert	4
4	042-0009-01	Groove Pin	6
5	029-0070-00	Chain Assembly (Includes Items 6 & 7)	2
6	• 016-0047-00	• Chain (Includes Connecting Links)	2
7	• 051-0027-00	• Adjustment Block 5/8	1
	• 051-0027-01	• Adjustment Block 7/8	1
8	016-0001-01	Leveling Screw	4
9	040-0250-54	Screw	4
10	030-0387-00	R.H. Support Channel	1
11	040-0375-50	Bolt	16
12	050-1559-00	Brace	1
13	015-0599-00	Hex Standoff	4
14	*(N.L.A.)*	Interface Board	1
	• 015-0346-02	Fuse (.15 amp.)	1
	• 015-0346-03	Fuse (5 amp.)	4
15	045-0001-08	Lockwasher	8
16	040-0010-34	Screw	4
17	050-1105-01	Front Lower Shroud	1
18	040-0010-04	Screw	8
19	015-0724-00	Oval Capacitor Bracket	3
20	015-0723-00	Capacitor	3
21	015-0461-00	Round Capacitor Bracket	1
22	015-0438-03	Capacitor	2
23	061-0195-00	Fuse Label	1
24	015-0524-00	Harness Jack	1
25	030-0387-02	L.H.Support Channel	1
26	020-0045-00	Base Casting	1
27	015-0540-00	Modular Couplier	1
28	015-0535-02	Cord	1
29	015-0508-00	Internal Footswitch Cable	1
30	015-0725-04	Jumper Wire (Black)	1
31	015-0457-00	Jumper Wire (Grn,Yel)	1
32	015-0466-01	Heat Shrink Tubing	1
33	050-1132-00	Wire Cover	1
34	015-0725-03	Jumper Wire (White)	1
35	050-1544-00	Spring Retainer Clip	1
36	040-0008-04	Screw	6
37	015-0639-00	A.C. Connector Receptacle	1
38	030-2030-00	Power Inlet Weldment	1

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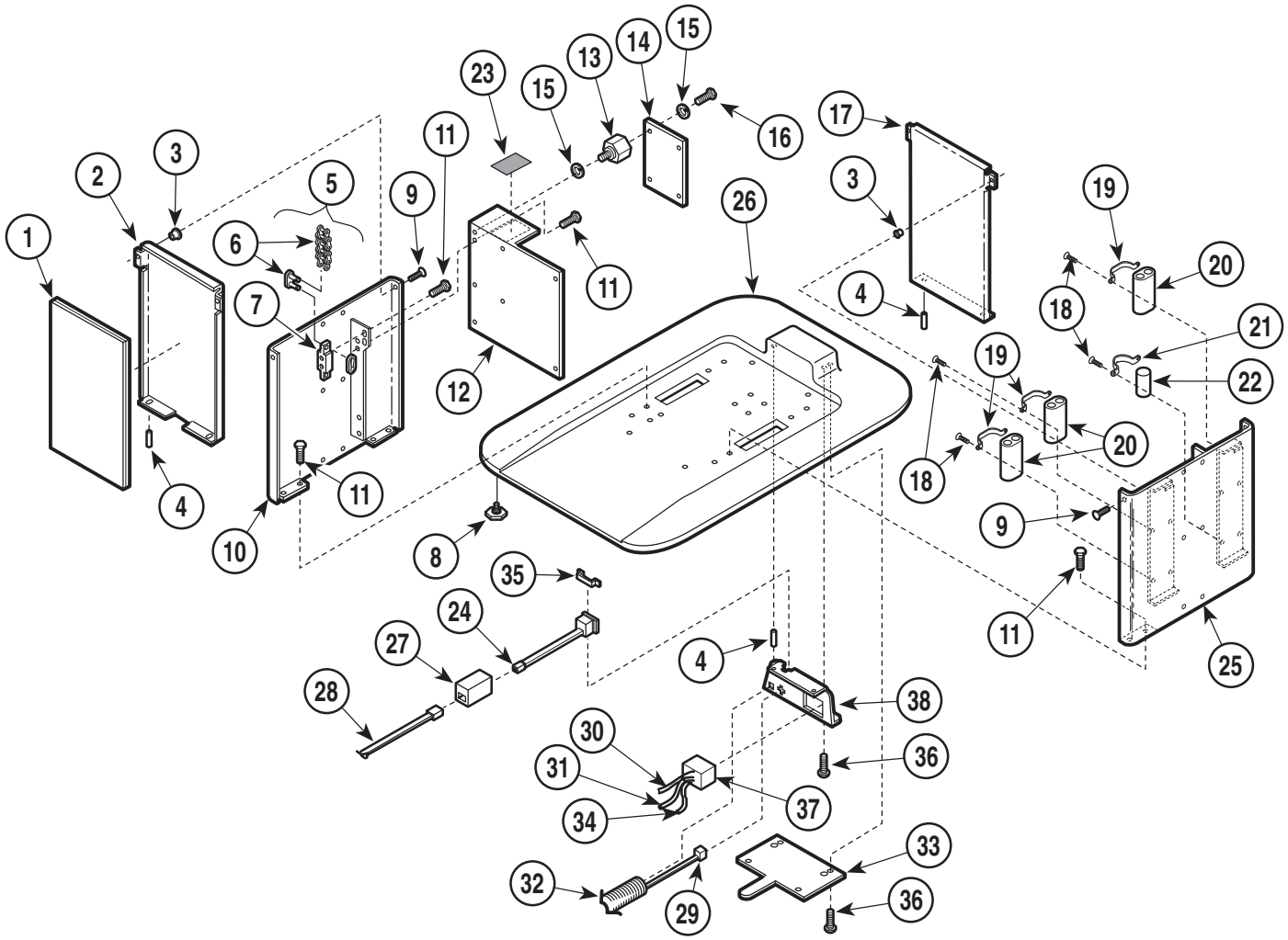

MA295700

Used on units with Serial Number DJ-1019 thru Present

Item	Part No.	Description	Qty.
1	054-0074-00	Sound Damp	1
2	050-1105-02	Back Lower Shroud	1
3	042-0045-03	Nutsert	4
4	042-0009-01	Groove Pin	6
5	029-0070-00	Chain Assembly (Includes Items 6 & 7)	2
6	• 016-0047-00	• Chain (Includes Connecting Links)	2
7	• 051-0027-00	• Adjustment Block 5/8	1
	• 051-0027-01	• Adjustment Block 7/8	1
8	016-0001-01	Leveling Screw	4
9	040-0250-54	Screw	4
10	030-0387-03	R.H. Support Channel	1
11	040-0375-50	Bolt	16
12	050-1559-00	Brace	1
13	015-0599-00	Hex Standoff	4
14	*(N.L.A.)*	Interface Board	1
	• 015-0346-02	Fuse (.15 amp.)	1
	• 015-0346-03	Fuse (5 amp.)	4
15	045-0001-08	Lockwasher	8
16	040-0010-34	Screw	4
17	050-1105-03	Front Lower Shroud	1
18	040-0010-04	Screw	8
19	015-0724-00	Oval Capacitor Bracket	3
20	015-0723-00	Capacitor	3
21	015-0461-00	Round Capacitor Bracket	1
22	015-0438-03	Capacitor	2
23	061-0195-00	Fuse Label	1
24	015-0524-00	Harness Jack	1
25	030-0387-05	L.H.Support Channel	1
26	020-0045-02	Base Casting	1
27	015-0540-00	Modular Couplier	1
28	015-0535-02	Cord	1
29	015-0508-00	Internal Footswitch Cable	1
30	015-0725-04	Jumper Wire (Black)	1
31	015-0457-00	Jumper Wire (Grn,Yel)	1
32	015-0466-01	Heat Shrink Tubing	1
33	050-1132-00	Wire Cover	1
34	015-0725-03	Jumper Wire (White)	1
35	050-1544-00	Spring Retainer Clip	1
36	040-0008-04	Screw	6
37	015-0639-00	A.C. Connector Receptacle	1
38	030-2030-00	Power Inlet Weldment	1

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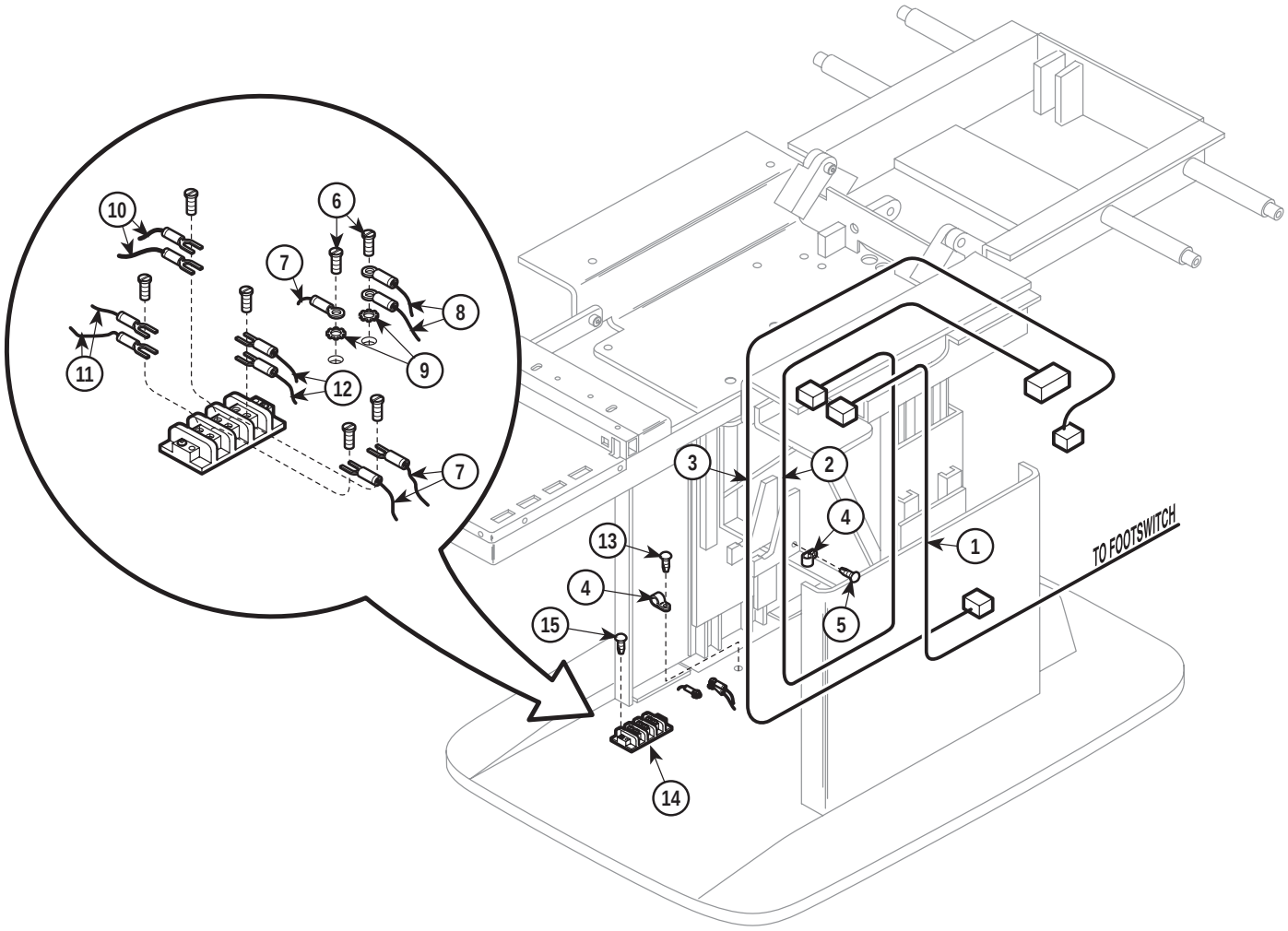
Hand Control and Footswitch Electrical Connections



MA259000

Used on units with Serial Number AV-1000 thru AV-1079

Item	Part No.	Description	Qty.
1	015-0452-00	Footswitch Cable	Ref
2	015-0474-00	Wiring Harness	1
3	015-0535-02	Cord Set	Ref
4	015-0014-01	Wire Clamp	2
5	040-0010-00	Screw	1
6	040-0010-47	Screw	2
7	015-0066-07	Power Cord	1
8		Jumper Wire (Refer to "Wiring Diagram" Elsewhere [Section 5])	Ref
9	045-0001-31	Lockwasher	2
10		Jumper Wire (Refer to "Wiring Diagram" Elsewhere [Section 5])	Ref
11		Jumper Wire (Refer to "Wiring Diagram" Elsewhere [Section 5])	Ref
12		Wire Harness (Refer to "Wiring Diagram" Elsewhere [Section 5])	Ref
13	040-0010-04	Screw	1
14	015-0009-05	Terminal Block	1
15	040-0006-33	Screw	2
16	015-0013-00	Cable Tie - 7 1/4" Lg. (Not Shown)	AR
17	015-0013-01	Cable Tie - 14 1/2" Lg. (Not Shown)	AR
18	015-0013-02	Cable Tie - 3 7/8" Lg. (Not Shown)	AR

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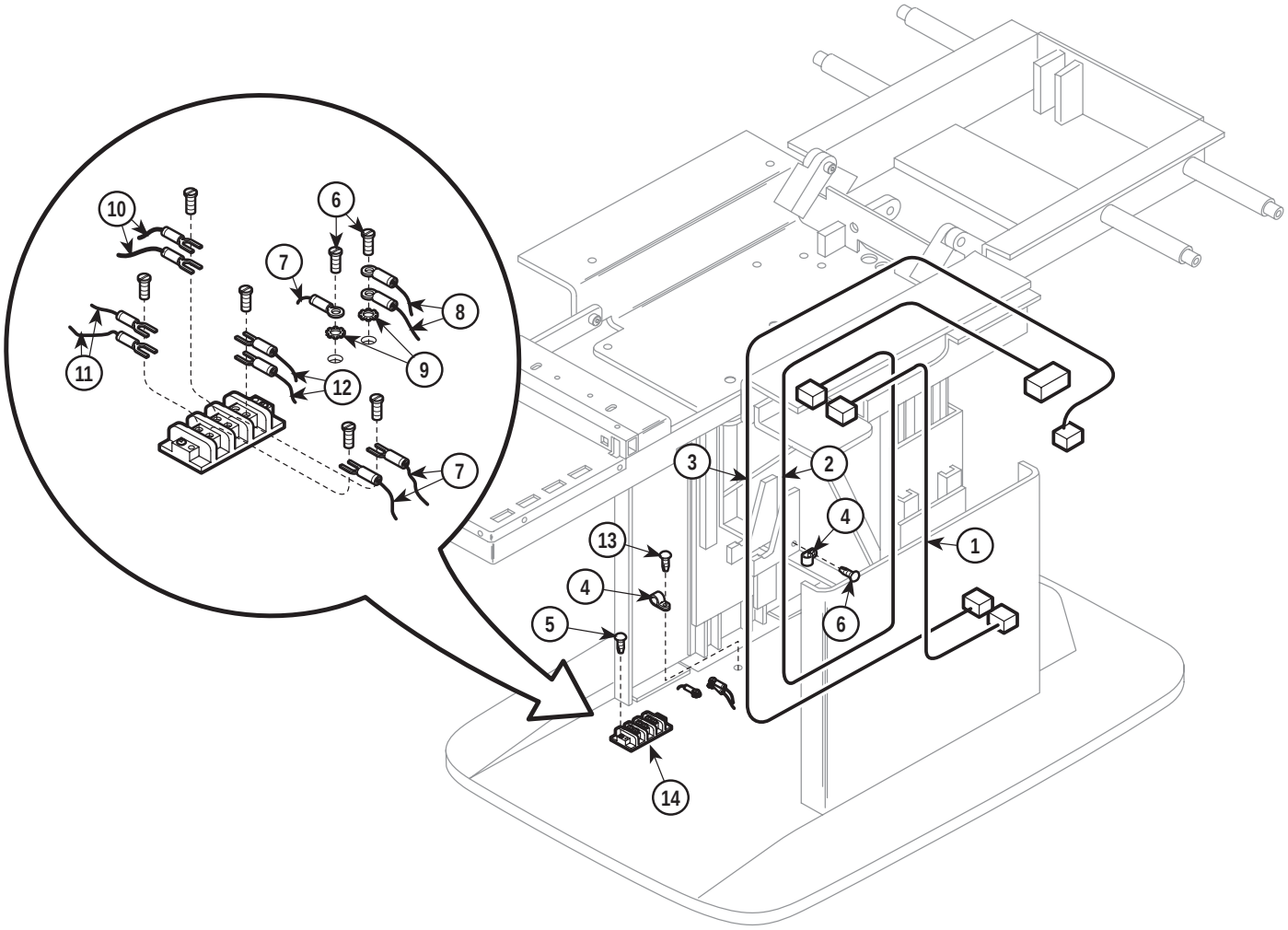
Hand Control and Footswitch Electrical Connections



MA259001

Used on units with Serial Number AV-1080 thru Present

Item	Part No.	Description	Qty.
1	015-0508-00	Internal Footswitch Cable	Ref
2	015-0474-00	Wiring Harness	1
3	015-0535-02	Cord Set	Ref
4	015-0014-01	Wire Clamp	2
5	040-0006-33	Screw	2
6	040-0010-47	Screw	3
7	015-0066-07	Power Cord	1
8		Jumper Wire (Refer to "Wiring Diagram" Elsewhere [Section 5])	Ref
9	045-0001-31	Lockwasher	2
10		Jumper Wire (Refer to "Wiring Diagram" Elsewhere [Section 5])	Ref
11		Jumper Wire (Refer to "Wiring Diagram" Elsewhere [Section 5])	Ref
12		Wire Harness (Refer to "Wiring Diagram" Elsewhere [Section 5])	Ref
13	040-0010-04	Screw	1
14	015-0009-05	Terminal Block	1
15	015-0013-00	Cable Tie - 7 1/4" Lg. (Not Shown)	AR
16	015-0013-01	Cable Tie - 14 1/2" Lg. (Not Shown)	AR
17	015-0013-02	Cable Tie - 3 7/8" Lg. (Not Shown)	AR

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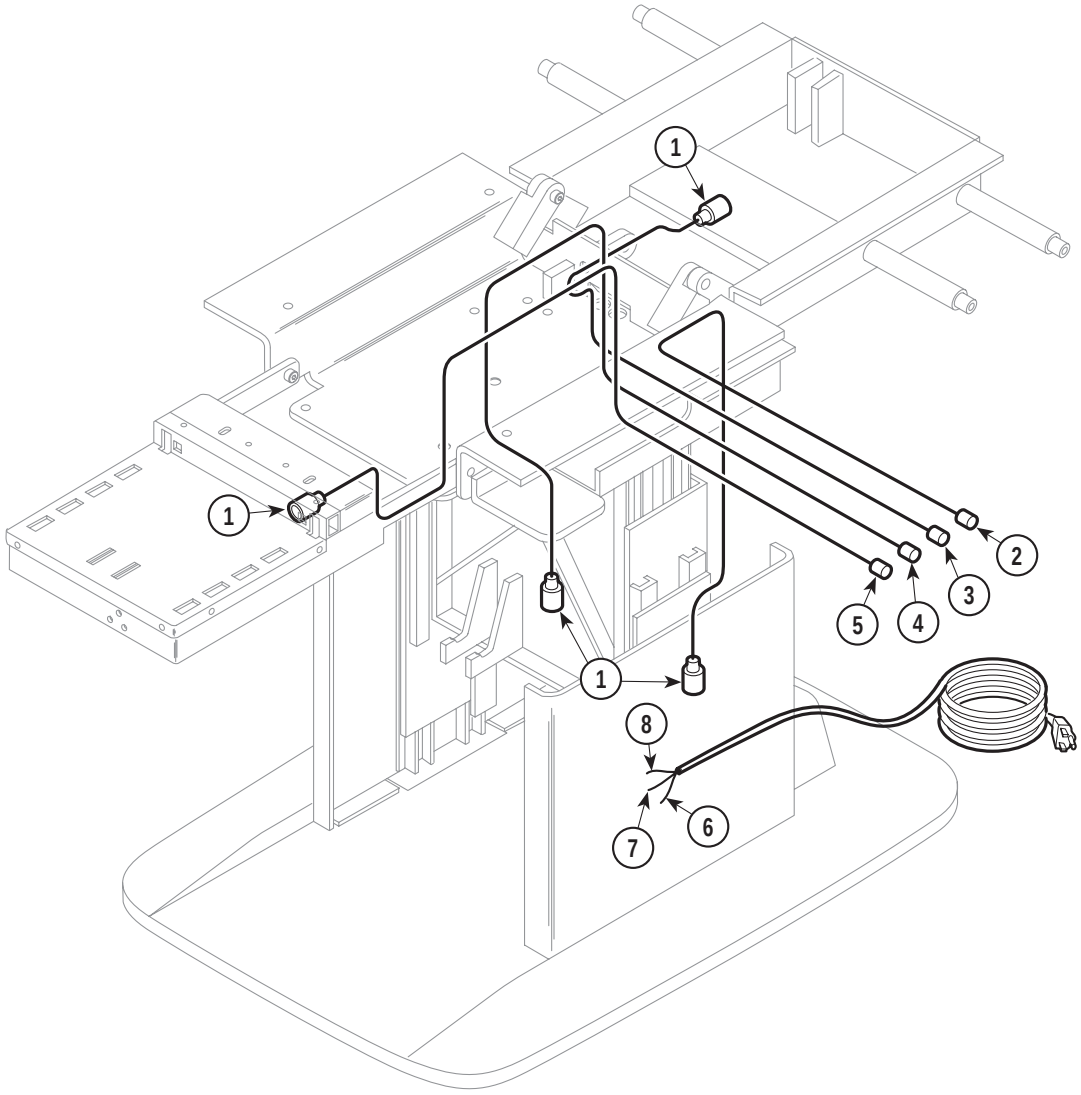
Transmitter Electrical Connections



MA259100

Used on units with Serial Number AV-1000 thru AV-2382

Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
1	002-0212-00	Transmitter Kit (Includes Matched Transmitter and Receiver)	4	6	015-0419-02	Jumper, Black	1
2	015-0473-04	R.F. Cable, Base	1	7	015-0419-03	Jumper, White	1
3	015-0473-03	R.F. Cable, Back	1	8	015-0457-00	Jumper, Grn/Yel	1
4	015-0473-01	R.F. Cable, Tilt	1	9	015-0013-00	Cable Tie - 7 1/4" Lg. (Not Shown)	AR
5	015-0473-02	R.F. Cable, Foot	1	10	015-0013-01	Cable Tie - 14 1/2" Lg. (Not Shown)	AR
				11	015-0013-02	Cable Tie - 3 7/8" Lg. (Not Shown)	AR

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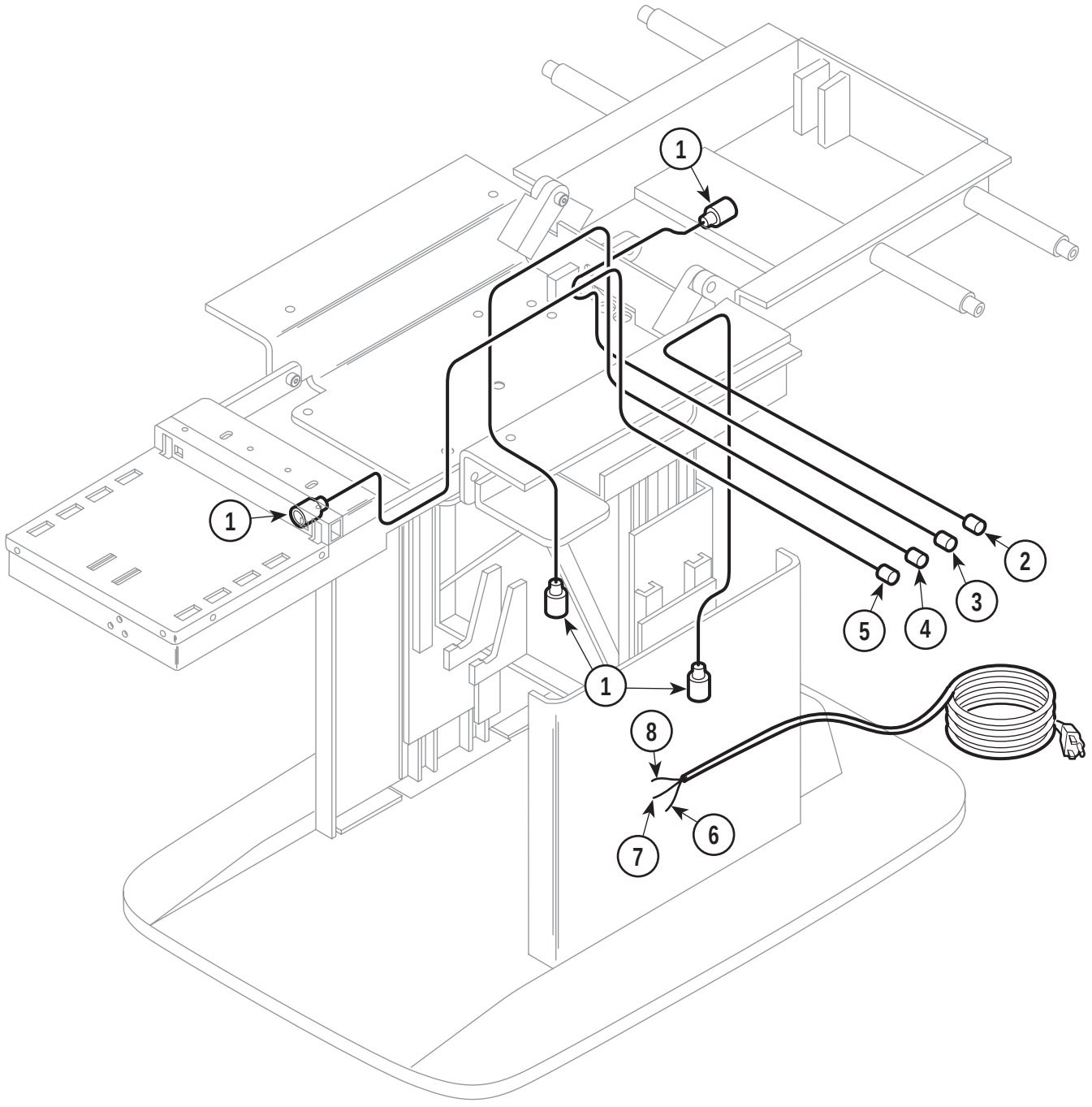
Transmitter Electrical Connections



MA259100

Used on units with Serial Number AV-2383 thru Present

Item	Part No.	Description	Qty.
1	002-0212-00	Transmitter Kit (Includes Matched Transmitter and Receiver)	4
2	015-0596-03	R.F. Cable, Green (Base)	1
3	015-0596-02	R.F. Cable, Yellow (Back)	1
4	015-0596-04	R.F. Cable, Grey (Tilt)	1
5	015-0596-05	R.F. Cable, Black (Foot)	1
6	015-0419-02	Jumper, Black	1
7	015-0419-03	Jumper, White	1
8	015-0457-00	Jumper, Grn/Yel	1
9	015-0013-00	Cable Tie - 7 1/4" Lg. (Not Shown)	AR
10	015-0013-01	Cable Tie - 14 1/2" Lg. (Not Shown)	AR
11	015-0013-02	Cable Tie - 3 7/8" Lg. (Not Shown)	AR

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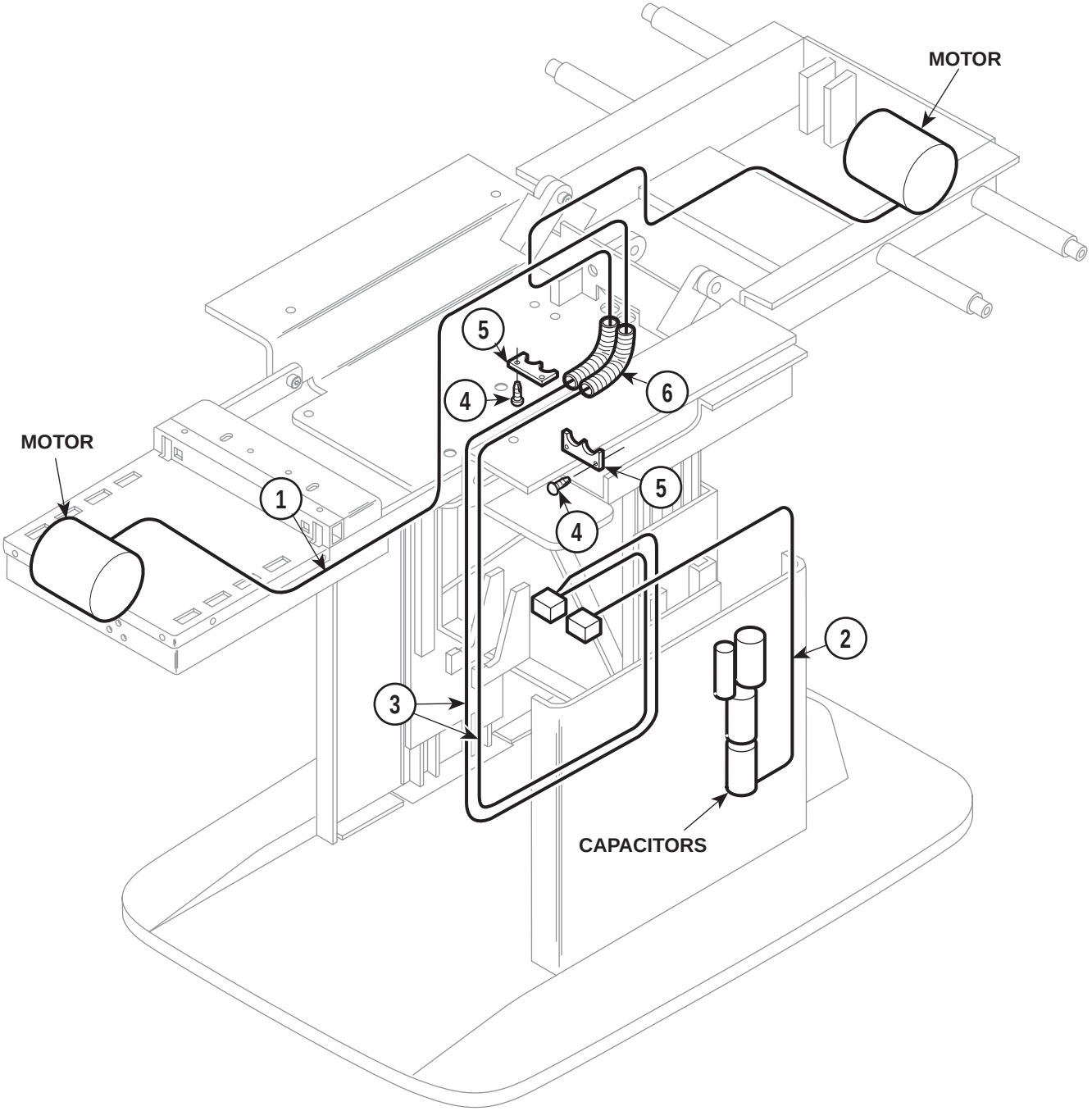
Motor and Capacitor Electrical Connections



MA2592-00

Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
1	015-0257-02	Flex Guard	2	6	015-0597-01	Flex Guard	2
2	015-0441-00	Capacitors Wire Harness (Domestic)	1	7	015-0013-00	Cable Tie 7.25" (Not Shown)	25
	015-0726-00	Capacitors Wire Harness (Export)	1	8	015-0013-01	Cable Tie 14.5" (Not Shown)	15
3	015-0981-00	Motor Wire Harness	1	9	015-0013-02	Cable Tie 3.875" (Not Shown)	15
4	040-0010-47	Screw	4	10	015-0001-00	Wire Clip - Export (Not Shown)	1
5	050-1564-00	Tubing Clip	2	11	040-0010-04	Screw - Export (Not Shown)	1

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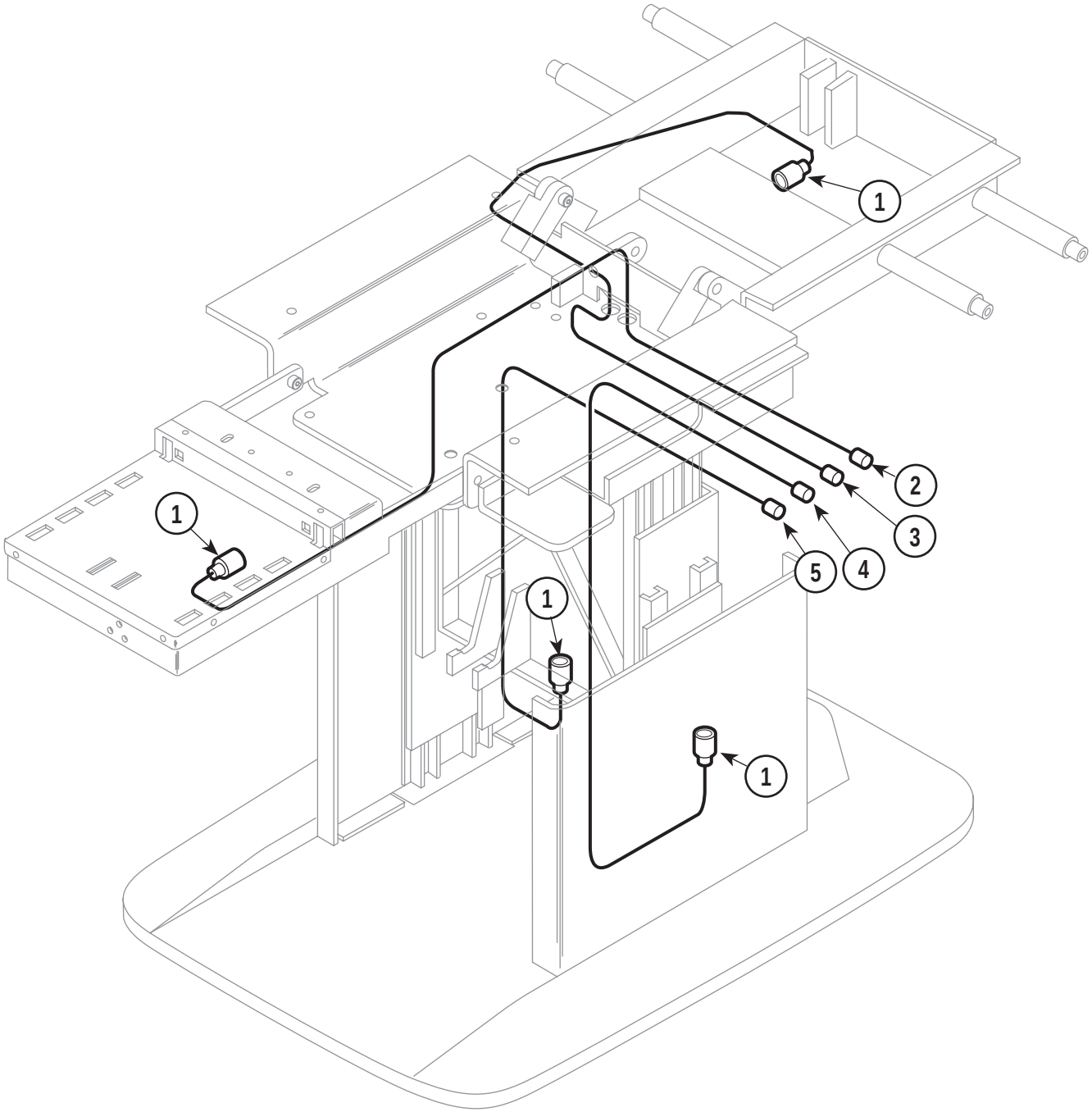
Receiver Electrical Connections



MA259300

Used on units with Serial Number AV-1000 thru AV-2382

Item	Part No.	Description	Qty.
1	002-0212-00	Transmitter Kit (Includes Matched Transmitter and Receiver)	4
2	015-0473-02	R.F. Cable, Foot	1
3	015-0473-03	R.F. Cable, Back	1
4	015-0473-04	R.F. Cable, Base	1
5	015-0473-01	R.F. Cable, Tilt	1
6	015-0013-00	Cable Tie - 7 1/4" Lg. (Not Shown)	AR
7	015-0013-01	Cable Tie - 14 1/2" Lg. (Not Shown)	AR
8	015-0013-02	Cable Tie - 3 7/8" Lg. (Not Shown)	AR

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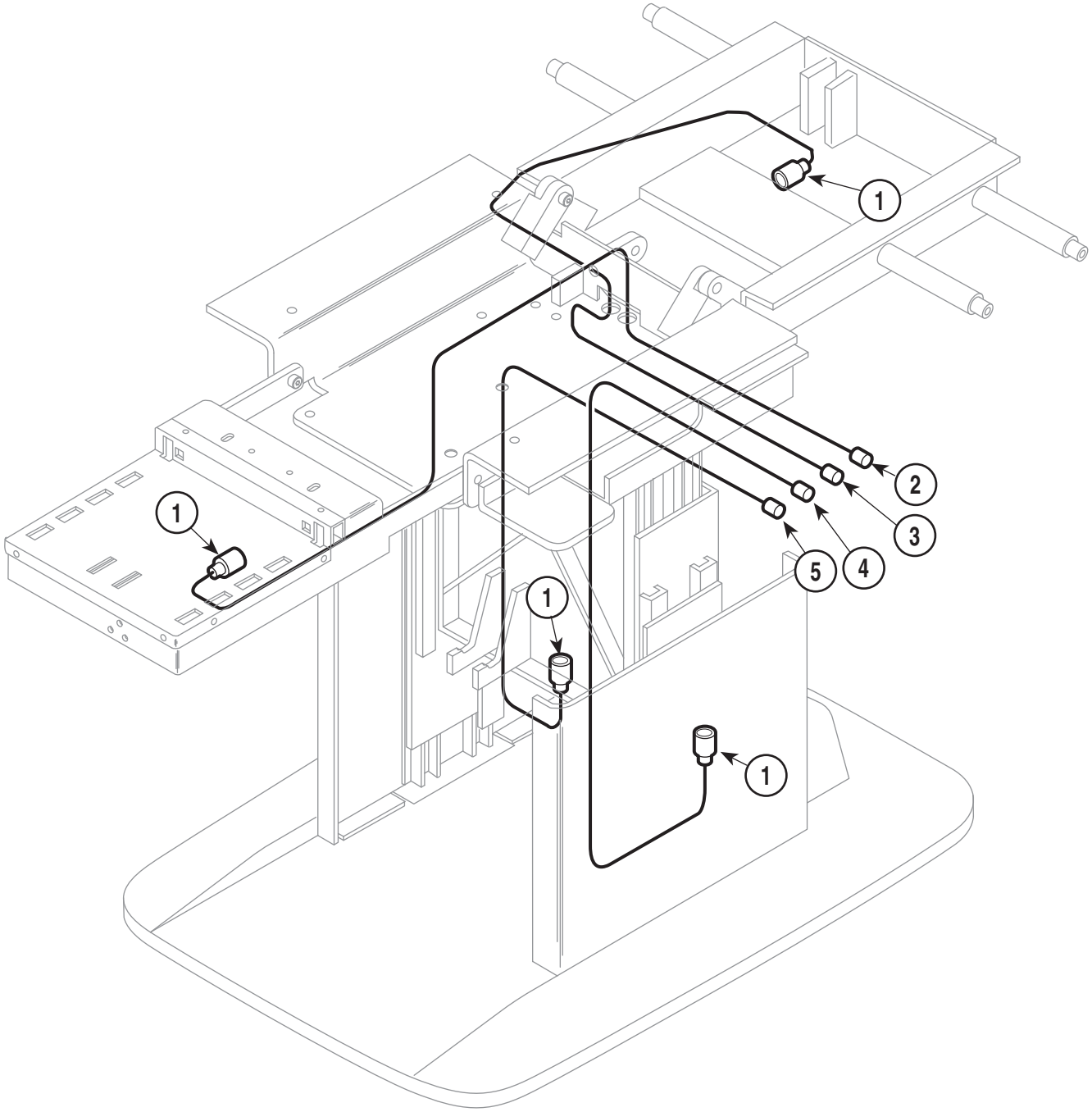
Receiver Electrical Connections



MA259300

Used on units with Serial Number AV-2383 thru Present

Item	Part No.	Description	Qty.
1	002-0212-00	Transmitter Kit (Includes Matched Transmitter and Receiver)	4
2	015-0596-08	R.F. Cable, White (Foot)	1
3	N.L.A.	R.F. Cable, Blue (Back)	1
4	015-0596-07	R.F. Cable, Orange (Base)	1
5	015-0596-01	R.F. Cable, Red (Tilt)	1
6	015-0013-00	Cable Tie - 7 1/4" Lg. (Not Shown)	AR
7	015-0013-01	Cable Tie - 14 1/2" Lg. (Not Shown)	AR
8	015-0013-02	Cable Tie - 3 7/8" Lg. (Not Shown)	AR

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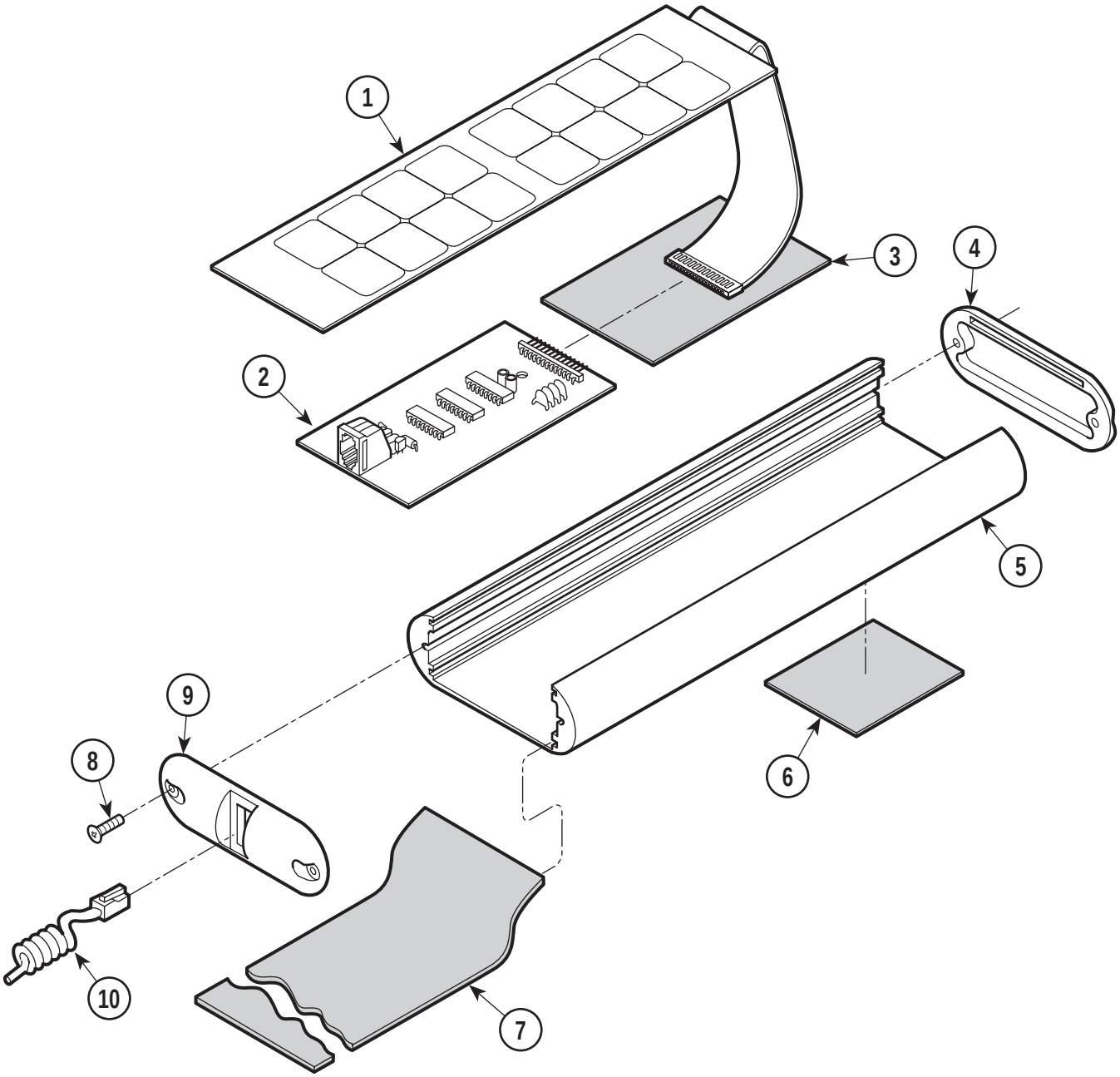
Hand Control



MA259700

Used on units with Serial Number AV-1000 thru AV-3663

Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
	9A73001	Hand Control (Includes Items 1 thru 11)	1	6	• 053-0131-00	• Velcro	1
1	• 015-0502-00	• Hand Control Panel	1	7	• 053-0092-04	• Fishpaper Insulator	1
2	• 002-0347-02	• Hand Control P.C. Board Kit	1	8	• 040-0006-08	• Screw	4
3	• 053-0253-00	• Locating Plate	1	9	• 053-0256-00	• Bottom End Cap	1
4	• 053-0257-00	• Top End Cap	1	10	• 015-0505-03	• Coil Cord	1
5	• 021-0016-00	• Hand Control Tube	1	11	• 053-0105-13	• Velcro (Not Shown)	1

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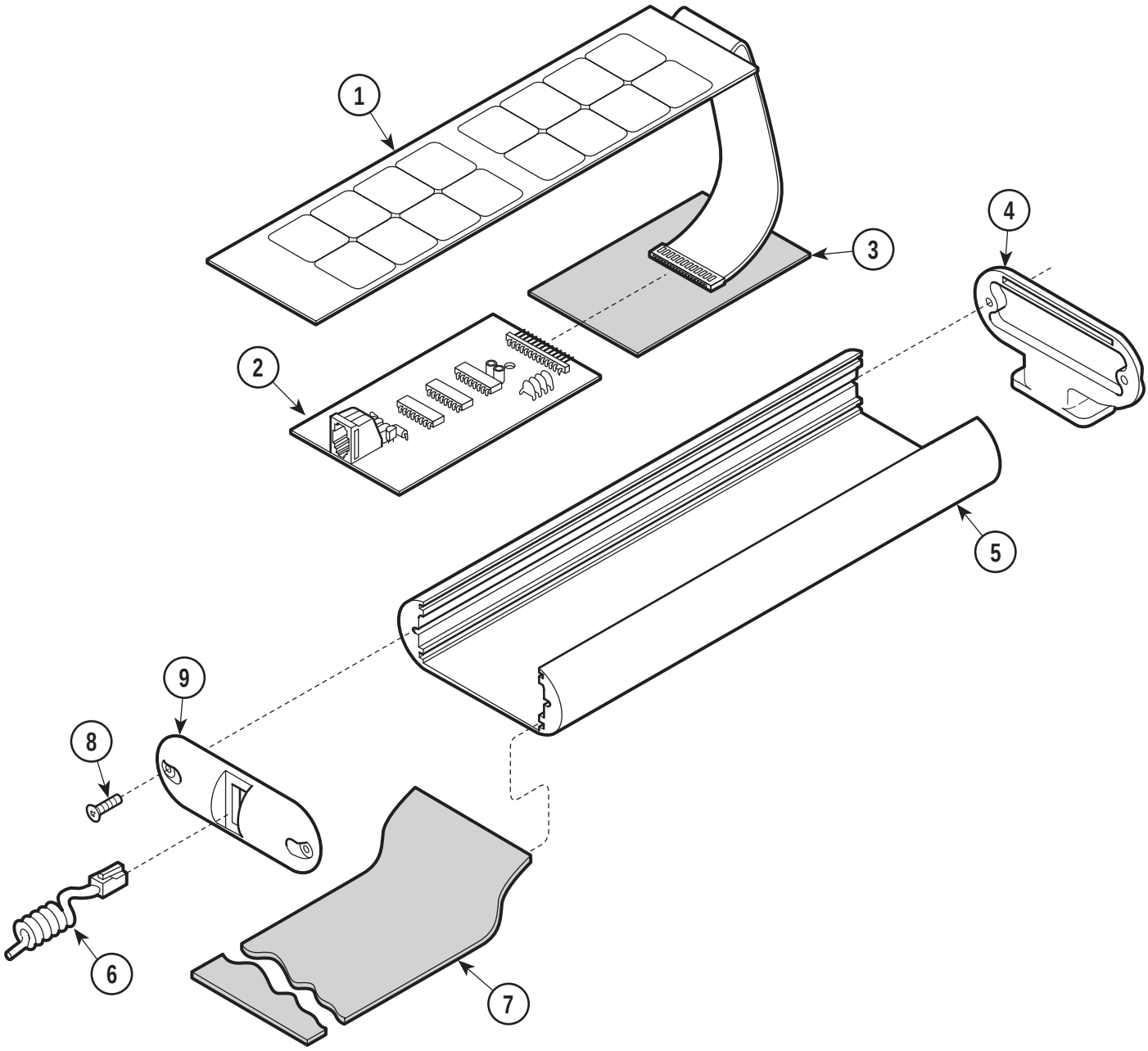
Hand Control



MA259701

Used on units with Serial Number AV-3664 thru Present

Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
	002-0410-00	Hand Control (Includes Items 1 thru 9) ..	1	5	• 021-0016-00	• Hand Control Tube	1
1	• 015-0502-00	• Hand Control Panel	1	6	• 015-0505-03	• Coil Cord	1
2	• 002-0347-02	• Hand Control P.C. Board Kit	1	7	• 053-0092-04	• Fishpaper Insulator	1
3	• 053-0253-00	• Locating Plate	1	8	• 040-0006-08	• Screw	4
4	• 053-0412-00	• Top End Cap	1	9	• 053-0256-00	• Bottom End Cap	1

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FAX ORDERING FORM

(SERVICE PARTS ONLY)

NOTES:

- **ALL BLOCKED AREAS MUST BE COMPLETED.**
- **USE FOR NON-WARRANTY FAX ORDERS ONLY. WARRANTY ORDERS MUST BE TELEPHONED IN (1-800-MIDMARK).**

ATTENTION: SERVICE DEPARTMENT FAX#: 877-249-1793

ACCT #: _____ **P.O. #:** _____ **DATE:** _____

NAME: _____ **SHIP TO:** _____

ADDRESS: _____

CITY, ST.: _____

CONTACT: _____

PHONE: _____

☐ **NON-EMERGENCY ORDER - TO SHIP WITHIN 72 HOURS IF PART(S) IN STOCK.**

☐ **EMERGENCY ORDER - TO SHIP WITHIN 24 HOURS IF PART(S) IN STOCK (IF ORDER IS RECEIVED BEFORE 1:00 P.M. E.S.T).**

SEND NOTIFICATION IF PARTS ARE NOT AVAILABLE TO SHIP WITHIN 24 HOURS VIA E-MAIL OR FAX TO: _____

METHOD OF SHIPMENT **OTHER** _____

UPS	FED EX
☐ NEXT DAY A.M.	☐ NEXT DAY A.M.
☐ NEXT DAY P.M.	☐ NEXT DAY P.M.
☐ 2ND DAY	☐ 2ND DAY
☐ GROUND	☐ ECONOMY

QTY.	PART #	DESCRIPTION (SPECIFY COLOR OF ITEM IF APPLICABLE)	COLOR CODE	PRICE/PER

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Midmark Corporation
60 Vista Drive
P.O. Box 286
Versailles, Ohio 45380-0286
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